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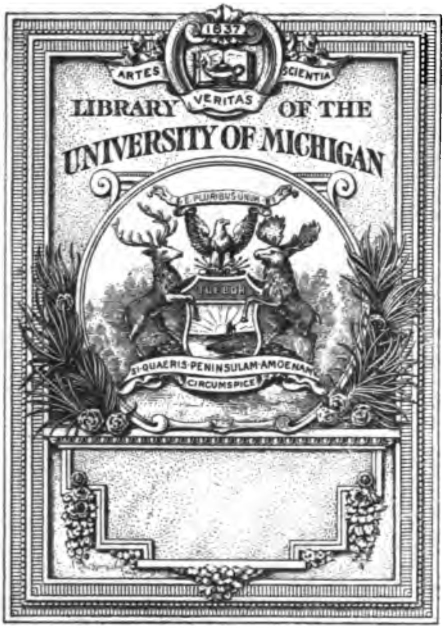
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PROCEEDINGS

OF THE

MEDICAL CONVENTION OF OHIO,

HELD AT COLUMBUS,

127010

ON THE 5TH, 6TH, AND 7TH OF MAY, 1841:

WITH

PAPERS ON SEVERAL SUBJECTS,

READ BEFORE THAT BODY.

COLUMBUS.
WRIGHT AND LEGG, PRINTERS.
1841.

PROCEEDINGS.

Pursuant to a resolution of the Medical Convention of the State of Ohio, adopted at a meeting of that body, held in Cleveland, on the 14th and 15th days of May, A. D. 1839; said Convention met at the Court Room of the Circuit Court, in the city of Columbus, on Wednesday the 5th day of May, A. D. 1841, at 10 o'clock, A. M.

The President being absent, Dr. John W. Russell, of Knox county, 3d Vice President, took the chair and called the Convention to order.

On motion of Dr. Boerstler,

Resolved, That Dr. M. Z. Kreider act as Secretary *pro tempore.*

On motion of Dr. Kreider,

Resolved, That a committee of three be appointed, to report forthwith to the Convention the names of individuals present, entitled to a seat therein, under the rule heretofore adopted.

Ordered, that Drs. Awl, Harrison, and Fisher, be that committee.

On motion, ordered, that the Convention take a recess for half an hour.

Half past 10 o'clock, A. M.

The Convention was called to order; when the committee reported the following persons as present, and entitled to seats, to wit:

Franklin county—Robert Thompson, James Irons, Wm. M. Awl, C. F. Schenk, J. Hawley, Nathl. M. Miller, Saml. Parsons, John B. Thompson, Saml. M. Smith, P. Sisson, A. Clarke, P. Goble, W. Trevitt.

Fairfield county—James Langworthy, A. Hor, M. Effinger, J. B. Potter, G. W. Boerstler, Joseph Sprague, G. J. Sachse, John M. Bigelow, and M. Z. Kreider.

Knox county—Lewis Dyer, M. H. Litzenberg, J. W. Russell.

Lorain county—R. L. Howard.

Muskingum county—J. Watkins.

Hamilton county—R. D. Mussey, John P. Harrison, John T. Shotwell.

Green county—John Dawson.

Warren county—B. Hinchman, E. Fisher.

Champaigne county—J. F. McReynolds.

Licking county—E. F. Bryan, W. W. Bancroft.

Richland county—J. P. Henderson.

Hocking county—C. B. Guthrie, R. Culver.

Highland county—C. C. Sams.

Delaware county—Ralph Hills, Charles H. Picket, Kingsley Ray.

Hancock county—M. Dana.

On motion of Dr. Awl,

Resolved, That a committee of five be appointed, to report the names of persons to fill the several offices in this Convention.

The chair appointed the following persons, said committee: Drs. Awl, Dyer, Bryan, Bigelow, and Shotwell.

The committee reported the following officers, who were unanimously elected, to wit:

For President,	George W. Boerstler,	of Fairfield	county.
1st Vice President,	John W. Russell,	Knox	"
2d " "	Elias Fisher,	Warren	"
3d " "	John P. Harrison,	Hamilton	"
4th " "	R. L. Howard,	Lorain	"
5th " "	N. M. Miller,	Franklin	"
6th " "	John Steele,	Montgomery	"

Recording Secretary, M. Z. Kreider, of Fairfield county.
Corresponding Secretary, Geo. Mendenhall, of Cuyahoga county.
Treasurer, Robert Thompson, of Franklin county.

On motion of Dr. R. Thompson,

Resolved, That Professor Mussey be invited to deliver a discourse upon the subject of "Tight Lacing," at such time as may suit his convenience, during the session of this Convention.

Resolved, That Professor Mussey be invited to deliver a discourse upon the subject of Phrenology, at such time and place as may be designated, during the present session of the Convention.

Resolved, That a committee of three members be appointed, to confer with Professor Mussey upon the subject matter of the foregoing resolutions; and in the event of his acceptance of the invitations therein contained, to make arrangements as regards time and place, and give public notice of the same.

Ordered, that Drs. R. Thompson, Irons, and Trevitt, be the committee contemplated by the third resolution aforesaid.

The following communication was then read by the Secretary:

To the Officers and members of the Ohio Medical Convention, now in Session:

Gentlemen,—The Superintendent of the Ohio Lunatic Asylum, respectfully presents his compliments to his medical brethren, and will be happy to see them in a body, at the Institution under his charge, at any period that may suit their convenience, during the sitting of the Convention.

Very Respectfully, &c.

Ohio Lunatic Asylum,
May 5th, 1841.

WILLIAM M. AWL.
Superintendent.

Which invitation was, on motion, cordially accepted.

On motion, the Convention took a recess until 2 o'clock, P. M.

Afternoon, 2 o'clock.

Convention met—the President in the chair.

Reports of committees were then called for.

Dr. Howard, from the committee appointed to report on the use and abuse of Mercurials, &c. asked further time to report; which was granted.

Dr. Thompson, from the committee appointed to invite Dr. Mussey to deliver certain Lectures, reported, that Professor Mussey had accepted the invitation, and would deliver the Lectures.

On motion, Dr. J. P. Harrison was invited to deliver a discourse on the abuses of Mercury; which invitation was accepted, and Dr. Harrison thereupon delivered a highly interesting discourse.

On motion of Dr. Kreider,

Resolved, That the thanks of the Convention be accorded to Dr. Harrison, and a copy of his monograph requested for publication in the Journal of the Convention; which request was complied with. [*See Dr. J. P. Harrison's address, on a subsequent page, marked "No. 1."*]

Thereupon, a very interesting desultory debate took place, relative to the influence of mercury upon the animal economy, and its ability at times to produce Sypholoidal affections. Also, whether Cancrum Oris may arise when no mercury has been taken—affirming this point. And further, as to the influence of cold water during the use of mercury—affirming and denying its tendency to induce ptyalism.

Dr. Howard, from the committee on that subject, asked to be discharged from the further consideration thereof, for the reason, that Dr. Harrison's paper contained very satisfactory information relative to the subject matter referred; which was granted.

Ordered, that the Report on Auscultation and Percussion, be read on to-morrow, at 10 o'clock, A. M.

Ordered, that the Convention will proceed at 2 o'clock, P. M., on to-morrow, to visit the Ohio Lunatic Asylum; at 3 o'clock, P. M. of same day, will visit the Institution for the Blind; and one hour thereafter, the Deaf and Dumb Asylum.

On motion, adjourned until to-morrow, at half past 8 o'clock, A. M.

Thursday morning, 8½ *o'clock.*

Convention met; President in the chair.

Journal of yesterday read and approved.

On motion of Dr. Kreider,

Resolved, That a committee of three be appointed to examine the previous Journals of the Convention, and report such subjects as may have been referred, and remain unreported upon.

Ordered, that Drs. Bancroft, Dawson, and Dyer, be that committee.

On motion of Dr. Miller,

Resolved, That a committee of three be appointed to ascertain the probable expenses of the Convention, and recommend some mode of raising the amount required.

The chair appointed Drs. Miller, Schenk, and Irons.

On motion of Dr. Guthrie,

Resolved, That, in the opinion of this Convention, the interests of humanity generally, and the welfare of that unfortunate class of our fellow citizens laboring under insanity, demand more extensive accommodations than the Lunatic Asylum now affords.

Resolved, That a committee of three be appointed, to prepare for transmission to the medical gentlemen of Ohio, a circular memorial, upon the propriety and necessity of an enlargement of the Ohio Lunatic Asylum.

Ordered, that Drs. Guthrie, Howard, and Hills, be that committee.

Dr. Miller, from the committee on that subject, reported, that a tax of two dollars be levied on each member in attendance, to defray the expenses incident to the Convention; which report was accepted, and the tax levied.

The hour having arrived for the reading of the report on Auscultation and Percussion, the same was taken up and read, and ordered to be printed. [*See paper marked "No. 2," on a subsequent page.*]

A debate then arose, growing out of the subject of the report, which was participated in by Drs. Harrison, Thompson, and Mussey.

On motion, Dr. Harrison presented and read a valuable paper on Medical Education; which address was ordered to be printed. [*See paper marked "No. 3," on Medical Education.*]

On motion of Dr. Miller,

Resolved, That Dr. J. P. Harrison be requested to deliver a lecture on the subject of quackery and empiricism, during the sitting of the Convention.

On motion of Dr. Howard,

Resolved, That Professor Harrison be requested to make a report on the *modus operandi* of medicines on the human system; to be presented to the Convention at its next meeting.

Resolved, That Drs. Miller, Parsons, and R. Thompson, be a committee to superintend and cause to be printed and distributed, 1000 copies of the proceedings of this Convention, at the present meeting; and that in distributing the same they send an equal number to each paying member now in attendance, to be by them distributed to other members of the Profession in this State.

On motion, adjourned until to-morrow morning, at 8 o'clock.

Friday morning, 8 *o'clock*.

Convention met; President in the chair.

Journal of yesterday read and approved.

On motion, the committee on Animal Magnetism had further time granted to report.

On motion, the committee appointed to report upon the human teeth, &c. had further time granted to report.

The committee appointed on the subject of the Lunatic Asylum, presented a memorial, which was adopted.

On motion of Dr. Guthrie,

Resolved, That the exhibitions of the different public Asylums, made to this Convention, have been most satisfactory, and highly gratifying; reflecting the highest credit upon their superintendents, and great honor upon the State.

Resolved, That the thanks of this Convention are due, and are hereby tendered to the superintendents, for their gentlemanly attentions.

On motion of Dr. Miller,

Resolved, That the system of Medical Education in the United States is radically defective.

Resolved, That the evil can alone be remedied by those having charge of medical schools.

Resolved, That it be respectfully, but earnestly, recommended to the Trustees and Professors of the medical schools in the United States, to meet in Convention, at such time and place as may be agreed upon by themselves, to digest and recommend a general system of Medical Education.

Ordered, that Drs. Miller, Harrison, and Trevitt, communicate the foregoing resolutions to the Trustees and Professors of the medical schools in the United States.

On motion, Dr. Bigelow presented and read a voluminous communication on the Botany of Fairfield county.

On motion of Dr. Dyer,

Resolved, That the thanks of the Convention are hereby tendered to Dr. Bigelow, of Lancaster, for his interesting paper on the Botany of Fairfield county, with the request that he furnish a copy of the same for publication in the Journal.

Which request was complied with. [*See paper "No. 4," entitled, "Florula Lancastriensis."*]

On motion, Dr. Dawson was requested to read a paper in his possession, relative to a disease which had prevailed in Green county; which request was politely complied with.

On motion of Dr. Harrison,

Resolved, That Dr. Dawson be requested to furnish a copy of his address for publication in the Journal.

Which requested was complied with. [*See paper "No. 5."*]

At the request of Dr. Miller, Dr. Harrison was made chairman of the committee to communicate with the Trustees and Professors of Medical Colleges.

Dr. Bancroft, from the committee on that subject, reported the following resolution, which was adopted:

Resolved, That the Secretary be requested to notify each member of the several committees, who have not reported, that he will be expected to present his report at the next meeting of the Convention.

On motion of Dr. Kreider,

Resolved, That in the opinion of this Convention, it is a moral duty, incumbent upon all committees, to report upon subjects referred; and that they will hereafter, in all cases, expect this expression to be made a rule of action of their committees.

On motion of Dr. Harrison,

Resolved, That Drs. Joseph Carter, A. Toland, and John Dawson, be appointed a committee to report, separately, to the next meeting of this Convention, all the facts coming under their observation in reference to Milk Sickness.

Resolved, That Professor Mussey be requested to report, at the next Convention, his views on the treatment of Inflammation by local stimulants.

Resolved, That Dr. Awl be requested to make a report at the next meeting of the Convention, on any particular form of Insanity which he may think proper to select.

On motion of Dr. Sams,

Resolved, That Professor Harrison be requested to report to the next meeting of the Convention, upon the effects of *Lobelia Inflata*, on the animal economy.

Resolved, That all members of committees who have been appointed to report on the diseases of various sections of the State, be requested to include in their reports, a history of the diseases of other animals, with the best treatment, and the appearances on *post mortem* examination.

On motion of Dr. Thompson,

Resolved, That Dr. Parsons be requested to read a paper upon the subject of the diseases incident to the early settlement of Franklin county.

On motion of Dr. Bigelow,

Resolved, That a committee consisting of three members be appointed by the chair, to draft a memorial to be presented to the Legislature of this State, at its next session, praying for a collection of books in the State Library, upon all the important branches of science, and more particularly upon the several departments of Natural History.

Ordered, that Drs. Irons, Thompson, and Parsons be that committee.

On motion of Dr. Awl,

Resolved, That Dr. Sisson be requested to read a paper upon the diseases of the convicts of the Ohio Penitentiary, at the next meeting of the Convention.

On motion,

Resolved, That when this Convention adjourns, it will adjourn to meet in the city of Cincinnati, on the third Monday in May, A. D. 1842.

On motion of Dr. Kreider, the following resolutions were adopted:

Resolved, That Professor Mussey be requested to deliver an address before the Convention, at its next meeting, on any surgical subject he may think proper to select.

Resolved, That Professor Shotwell be requested to deliver a discourse before the Convention, at its next meeting, on the subject of Anatomy, human and comparative.

Resolved, That the President be empowered, at any time during the recess of the Convention, to appoint individuals in any part of the State, to deliver discourses on such subjects as he may assign to them; said discourses to be produced before the Convention, at its next meeting.

Resolved, That Professor Harrison be requested to deliver an address or discourse on Fever, before this Convention at its next meeting.

On motion of Dr. Dyer,

Resolved, That the thanks of the Convention are due, and are hereby tendered, to its officers, for the able and impartial discharge of their respective duties.

On motion of Dr. Awl,

Resolved, That Professor Shotwell be requested to prepare a proper subject, and demonstrate the surgical anatomy of Hernia, before the members of the Ohio Medical Convention, at our next meeting in Cincinnati.

On motion of Dr. Irons,

Resolved, That Dr. Robert Thompson be requested to deliver a lecture on the cure of Prolapsus Uteri, at the next meeting of the Ohio Medical Convention.

On motion of Dr. Awl,

Resolved, That it shall be the duty of the Secretaries to give at least two months notice of their next meeting, in three public newspapers of this State; and that it be the duty of the members of the Convention to have the same copied into the newspapers of their respective counties.

Dr. R. Thompson submitted the following resolution, which was by his request ordered to lie on the table until the next meeting of the Convention:

Resolved, by the Medical Convention of Ohio, That a Delegate be appointed to meet with, and attend upon, the sittings of the Medical Section of the British Association, at its next meeting subsequent to May, A. D. 1843.

On motion, the Convention took a recess until 4 o'clock this afternoon.

Afternoon, 4 o'clock.

Convention met; President in the chair.

On motion, an additional tax of two dollars was levied on the members of the Convention, to defray the expenses incident thereto.

On motion of Dr. Harrison,

Resolved, That Dr. Irons be requested to present an essay on the probable effects of introducing flexible tubes into the Trachea, in the treatment of Croup.

On motion of Dr. Irons,

Resolved, That Dr. Nathl. M. Miller be requested to present his views on the *modus operandi* of Epispastics, at the next meeting of the Convention.

On motion of Dr. Awl,

Resolved, That Dr. Kreider be requested to read a paper on secondary hæmorrhage, before this Convention at its next meeting.

On motion of Dr. Kreider,

Resolved, That Dr. Trevitt be requested to read a paper before the Convention, at the next meeting, on the subject of Paralysis.

On motion,

Resolved, That this Convention, through its Secretary, request Dr. Kirtland to furnish for publication, his address intended to be delivered at the present meeting.

On motion of Dr. Kreider,

Resolved, That Dr. Schenk be requested to read a paper on the subject of Gonorrhœa, at the next meeting.

Resolved, That Dr. Hawley be requested to read a paper on the subject of Laryngra Stridula, at the next meeting.

On motion of Dr. Sams,

Resolved, That each member of this Convention be requested to report at the next meeting, as to the existence and condition of County Medical Societies, in this State.

On motion, adjourned until the third Monday in May, A. D. 1842, to meet at the city of Cincinnati.

G. W. BOERSTLER,
President.

M. Z. KREIDER, *Rec. Secretary.*
W. M. AWL, *Cor. Secretary.*

[No. I.]

DISEASES INDUCED BY MERCURY.

BY DR. J. P. HARRISON.

There exists in the minds of many enlightened practitioners, a persuasion that Mercury exercises no very protracted morbid influence upon the system, except when administered to eradicate the venereal disease.

Musgrave, who practiced in Antigua, in a communication of his, in the 28th vol. of the Edinburgh *Medical and Surgical Journal*, on the unmixed effects of Mercury on the system, declares that he never saw or heard, of "a case where symptoms bearing the stamp of secondary syphilis, in the common acceptation of these words, were ever suspected to be the offspring of Mercury administered for the cure of any other disease;"—"that the only bones he ever saw immediately or ultimately affected by the most aggravated cases of mercurial mismanagement, were those of the upper and lower jaw, whose vitality might have been partially destroyed by a process of denudation, caused by the extensive sloughing within the mouth, which involved their periosteum."

Carmichael asserts, that "neither the throat nor bones are liable to disease from the exhibition of the most extensive course of Mercury in any other than the venereal disease;—nor is the skin liable to any eruption, except the well known mercurial eczema." Drs. Chapman and Eberle concur in this positive averment of Carmichael; they both quote his declaration with an approving comment, and seem to repose entire confidence in the correctness of the doctrine advanced. Now, with all this weight of authority against the opinion of the dangers incident to Mercury, inopportunely given, and the occasional severity of its effects from peculiarity of constitution, we cannot abandon the position, that this remedial agent is capable of producing diseases of the throat, skin, and bones, with their investing membrane, analogous in aspect, and equally destructive in their progress, to those of an unequivocal venereal origin.

With a thorough conviction, derived from much experience of the effects, curative and morbid, of Mercury, we hesitate not to utter a solemn protestation against the comparative innocuousness of the remedy which the above cited authors have set forth.

The morbid effects of Mercury may be divided into the immediate and remote. The immediate, or direct effects of a morbid kind which spring from its use, are its violent action on the stomach, bowels, mouth, skin, and nervous system. The remote morbid phenomena induced by it are palsy, ulcerations of the soft parts, and diseases of the bones. There is not an efficient agent in the whole compass of our curative means but what carries in its own properties, both a bane and an antidote. Or in other words, every weapon of the materia medica, is double edged, and may be wielded either for the weal or harm of the body. Our evacuants, narcotics, counter-irritants, secretants, incitants and alterants, all possess this double and reactive capacity. They are, in virtue of their activity, influential in several modes in the generation of morbid results.

1. Some of them are virulent powers, requiring great delicacy in their administration, to prevent them from distressing the functions of life.

2. An excess of action of the most efficient remedies cannot always be guarded against, because the extent of their use in disease, is only to be limited, in numerous instances, by the direct phenomena developed upon their exhibition. When, therefore, morbid action runs high, the remedy must be pushed to an extent, and with a vigour, commensurate to the degree of incumbent danger. The disease vanquished, the action of the remedy may overpass the proper bounds, and reactively inflict great, perhaps, irremediable evil on the system.

3. Inappropriateness of use will, of course, engender bad consequences.

4. Peculiarity of constitution, or an inscrutable susceptibility to the action of certain agents, is often productive of unexpected injurious effects.

Crude Mercury has been known to produce rupture of the bowels, when given in half pound doses, in strangulation, or obstinate obstruction. But this rash and dangerous practice is now laid aside by every one having any pretensions to science, or humanity. An amalgam of tin and Mercury, in the case of a Mr. Prior formerly of Louisville, Ky., to the extent of at least sixteen ounces, remained in the cells of the colon two and a half years. Nineteen ounces of the amalgam were taken in all;—fifteen ounces, were taken, according to his physician's directions, within the same number of hours, an ounce every hour, followed by a purgative on the next day, which brought away forty feet of tape worm; for the expulsion of which it was administered. Shortly subsequent four additional ounces were taken, making nineteen ounces in all. Of this he was confident that not more than three ounces were evacuated, the rest remained a compact body, easily felt and moved about, near the umbilicus. When he rode priapism was induced by it, but he bore walking with little inconvenience. Upon an attack of bilous fever in 1822, inflammation, rapidly terminating in gangrene, took place in the colon. Inspection after death revealed a portion of the bowel in a sloughed state, with the amalgam completely encysted in the coats of the intestine, by an adventitious membrane.

Corrosive Sublimate is one of our most active poisons. It corrodes, inflames, and destroys with great rapidity, the tissues of the body. Applied to the surface, as a wash, or ointment, it has frequently been known to kill. Its antidote is albumen, or gluten, in the form of the whites of eggs, or of flour. Calomel, by Hoffman, and some other authors, was considered as a poison. Dr. Christison asserts, in the third edition of his work on Poisons, that, "calomel is also an irritant; that is, it causes irritation and inflammation in the alimentary canal when swallowed." And yet the learned author quotes the practice of Johnson, Annesley, and of the American physicians, to prove that large doses of calomel calm irritation. Calomel in a moderate dose, says Christison, for example five grains, is an irritant. This, we need not contradict. Because calomel sometimes vomits, and generally purges, by no means demonstrate, that it is an irritant. Infants take calomel better than any other medicine. In gastritis we give it, and it soothes the inflamed mucous membrane. In dysentery it is freely employed with manifest abatement, upon each repetition of the dose, of the tormina and tenesmus. Red precipitate, the sulphate, cyanide, and proto-ioduret, are each irritant and poisonous.

Excessive mercurial medication produces great destruction at times on the mouth. The excessive salivant effect of the remedy, when given to arrest a severe acute disease, cannot always be circumscribed. Under the most judicious management mercury will sometimes induce destructive ulceration of the mouth.

Inapplicability of the remedy has produced much evil. Thus the arbitrary juxtaposition of Mercury and the syphilitic poison, has perpetrated a multifarious amount of practical mischief.

Every sore on the genital organs, contracted by sexual intercourse, is regarded by many medical men as syphilitic. Mercury is the only antidote to the poison of syphilis. Mercury never produces secondary ulcers, nodes, and eruptions on the skin, but the progressive march of syphilis is thus developed on the constitution. Such is the logical process by which the abuses of Mercury in syphiloid, and mercurial diseases, are perpetuated.

The cases of death, succeeding the administration of calomel, given by Hoffman, were the result, either of an adulteration of the medicine by corrosive sublimate, or some very extraordinary idiosyncrasy. Trotter, in his work entitled, Nervous Temperament, has pointed in the darkest hues the dangers incurred by the activity displayed by calomel on the first passages.

From an anomalous susceptibility of the digestive tube to the impression of mercurial preparations, severe vomiting, and even bloody evacuations from the bowels, have been known to spring from calomel. Cases of jaundice have been reported by high authority as directly originating from calomel, given as a purgative. The functional derangement of the liver in such cases, we presume, arose from the stimulus imparted to the organ being too great, or from the irritated state of the duodenal mucous membrane, occasioned by the remedy.

A few such cases have fallen under our observation. A lady, attacked with epidemic dysentery, required the use of calomel. She took at first ten grain doses, then five grain doses, both with and without opium. Upon every repetition of the dose of calomel a most alarming prostration, with tendency to syncope, came on. Calomel always thus affected her. This adventitious disturbance of the nervous system did not interrupt the curative operation of the remedy.

Sir W. Philip gives the case of a lady who could not take the minutest quantity of calomel, without such great depression and irritation, as to compel the abandonment of the remedy. The intense morbid irritability, which sometimes accompanies a mercurial course, in an aggravated form, constitutes the erethismus mercuriale.

Pearson, who first gave a graphic and faithful picture of this nervous disorder, thus describes it. It is characterized by great depression of strength, a sense of anxiety about the præcordia, irregular action of the heart, frequent sighing, trembling, partial or universal, a small, quick, and sometimes an intermitting pulse, occasional vomiting, a pale contracted countenance, a sense of coldness: but the tongue is seldom furred, nor are the vital or natural functions much disordered.*

Such attacks are exceedingly rare except in depraved habits, or in confined localities, as in crowded hospitals or in prisons.

The internal administration of Mercury, in these cases, must be laid aside; the patient is to be exposed to fresh air, and be stimulated by ammonia, opium, or camphor, whilst adequate nutriment is to be afforded. The external use of Mercury must be substituted for calomel, or blue pill, whilst we persist in the corroborant plan, already indicated.

The eruptive affection, termed eczema, hydrargyria, erythema, and mercurial lepra, respectively, by Pearson, Alley, Spens, and Moriarty, is vesicular in its character, and has in some cases resulted from a single dose of blue pill, or calomel. It is sometimes fatal, from the extensive nature of the eruption, and the great constitutional derangement and prostration incidental to the attack. A soothing tonic plan of treatment should be adopted for the restoration of the patient.

It is a very rare morbid result of Mercury, and occurs in constitutions of a scrofulous and degenerate kind.

The action of Mercury upon the mouth requires an explicit consideration. We have already stated in general terms the mode in which the constitutional agency of this drug is revealed on the salivary glands, and parts adjoining. The salivant, as has been stated, is but incidental to the general effect. The degree of constitutional influence and the local action of mercury on the mouth, are ordinarily graduated by reciprocal equality. The exceptions demand specification. First, a prior salivation predisposes to a rapid and disproportionate local action. In the second place the state of the constitution is an adventitious cause which interferes with a proper exercise of the reciprocity existing between the general and local modes of action of Mercury. A cachectic, scrofulous, cancerous, or scorbutic constitution, lays the foundation for this inequality of the mercurial influence.

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* Observations on the effects of various Articles of the Materia Medica in the Cure of Lues Venerea. p. 156.

In the third place, regimenal treatment modifies the just relation between the constitutional and local development of mercurialization. The protecting power of a high temperature, in shielding the salivary glands, and general system, from the injurious action of Mercury, is conspicuously evinced in the comparative safety of an energetic and most liberal use of the remedy in the diseases incident to tropical climates.

The exposure of a patient to a cold damp atmosphere, without proper clothing, after taking ten grains of calomel, produced a salivation which lasted eight weeks. Repeated cold ablutions of the head, after a pretty liberal use of calomel, during the decline of an attack of fever, induced in another patient, a mercurial sore mouth which persisted some time. The exposure of the same patient to a cold humid night air brought on a severe ulceration of the throat, with rheumatic pains, and eruptions of the skin. The first perceptible agency of Mercury on the mouth is denoted by an increased secretion of the salivary glands; with an augmented determination of blood to the gums, evinced by their slightly tumid and red aspect. A cupreous or metallic taste is on the tongue, and an offensive halitus is given off by the breath. With these phenomena there is a slimy, white superficial coat on the tongue, which is enlarged in volume, so as to bear the indentations of the teeth. A sense of soreness is felt in the throat, and in the fauces and tongue, with tenderness of the gums, when the patient is directed to shut his mouth forcibly. At this stage of the salivation it is desirable to stop. But it is much easier, to wish and hope for such a mild demonstration of the local action of the remedy, than to secure it. Advancing further the salivant effect of the agent is displayed in a loosened state of the teeth, severe inflammation in the buccal mucous membrane, enlargement of the parotic glands, and general tumefaction of the face. The saliva streams forth copiously, often intermingled with blood; the tongue ulcerates; and sometimes protrudes through the lips: the patient is rendered incapable of speech, and deglutition even of liquids is difficult.

Whilst the mouth is thus affected with an intense degree of mercurialization, the skin, especially of the extremities, is inclined to a reduction of temperature; the bowels are torpid, and the pulse quick and irritable.

When a moderate mercurial fever is present the skin is warm and moist, the pulse strong and quick, and the bowels readily acted on by purgative medicine. A moderate sialagogue action of Mercury is always accompanied by an increased secretory effort on the part of the kidneys, skin, and especially the liver. But when an urgent concentration of mercurial influence takes place upon the mouth, the other great emunctorial outlets have a portion of their nervous and vascular endowments withdrawn, or weakened.

The local treatment of a common mercurial sore mouth is best conducted by astringents, such as sugar of lead, sulphate of zinc, or copper, and a strong infusion of common tea. The acetate of lead is the most soothing, and although it blackens the teeth, no permanent inconvenience ensues, as the precipitation of the lead induced by the sulphuretted hydrogen in the saliva, which is the cause of this discoloration, wears off in time.

Should fever be present, the eighth of a grain of tartar emetic, given in spirits of mindereri, should be administered every two hours, and the bowels kept soluble by oil, seidletz powders, or epsom salts.

At night Dover's powder, or extract of hyoscyamus with ipecacuanha, should be prescribed, to procure the patient rest. The internal use of the sugar of lead is a valuable means of checking an intense salivation. This remedy should not be exhibited whilst there is much febrile heat, and activity of the pulse. A blister to the cheeks, or back of the neck, will aid in reducing the inflammation. The warm bath, with opium, and sugar of lead, must be prescribed in cases attended with coldness of surface, and languid circulation.

Iodine has been successfully used in such cases, so also has nitric acid, and other tonics. We have been so much gratified with the last named article, that in mild cases of salivation, particularly in convalescence from fever, where the mouth has been touched by Mercury, it commonly constitutes our reliance, in conjunction with hyoscyamus, to impart strength, and appetite, and to abate morbid irritability. Two drachms of the extract of hyoscyamus are put into an ounce of nitric acid, and the patient is directed to take five drops every two hours.

If ulceration exists on the tongue, lips, or cheeks, we substitute a solution of sulphate of copper, twenty grains to eight ounces of water, for the sugar of lead. Peruvian bark, and sometimes balsam copaiva, are added to the solution of blue vitriol. Two drachms of the bark, or the same quantity of the copaiva, mingled with mucilage, are added. A small quantity of this mixture held in the mouth, or applied to the ulcerated points, by a soft sponge, soon stimulates the ulcers to a restorative action. Nitrate of silver, in solution, is likewise a good application in such cases.

The patient must be kept in an equable temperature; no cold drinks, nor cold applications, are to be used, and a soft flannel should cover the throat, if the air of the chamber is cool and damp.

Such are the usual phenomena, with the mode of treatment, of an ordinary mercurial sore mouth. It is apparent that all we have to contend with in such cases is the excessive development of the legitimate action of the remedy on the mouth. This display of its constitutional agency we may safely moderate, by the means enumerated above, but should not attempt suddenly to extinguish. Evil consequences have followed precipitate measures for the arrest of a mercurial salivation.

But there are two modes by which the action of mercury is exhibited on the mouth, which are to be depricated in all cases; for they are evidential of the irregular and perverted train of morbid results which follow upon an inopportune use of the remedy, or which arise in a system incapable of evolving and maintaining the appropriate constitutional operation of the agent.

These two modes of perversion in the salivant action of the remedy are characterized by an absence of secretion in the mucous membrane and glands, and by an irritative fever, with dry hot skin, bound bowels, and deficient urinary discharge.

The most dangerous kind of what may be denominated the dry salivation, occurs in children. It has been said that children under six or eight years of age are not susceptible of salivation. If by the word salivation be meant a copious emission of saliva produced by mercury, we agree to the position taken. But the appellation is made to cover more ground than the obvious salivant phenomenon. It is assumed by some writers that a child under six years of age cannot have its mouth made sore by mercury. This is erroneous, and calculated to mislead the unwary. An infant before dentition, we have never known to be affected by a sore mouth from the action of mercury. But after dentition sets in, children are liable, upon the protracted employment of calomel, to become the subjects of a severe disease in the mouth. This is termed gangrænopsis, cancrum oris, or dry gangrene. It commences in a white appearance of the gums, which recede from the teeth;

the lips are slightly tumified; no mercurial odour emanates from the mouth. Sometimes aphthous looking sores are seen on the internal surface of the lips, tongue and cheeks. The most alarming symptom, however, in such a case, is the swollen condition of the cheeks, with the rapid progress of the inflammation to gangrene. A small red spot commences in the middle of the cheek, which rapidly changes its aspect from a red to a dark color.

No abatement takes place in the swollen appearance of the face; the eyes, perhaps, are closed by the œdematous state of the infra orbital cellular tissue; no saliva issues from the mouth, which now has a most offensive odour. We once saw a little girl of four years old, with an attack of fever, who died from the mercurial cancrum oris. Other children we have seen, more advanced in years, who fell victims to the disease, or who were mutilated by it, their countenances being shockingly deformed by the sloughing, and subsequently puckered cicatrization. Upon this topic our thoughts have been much directed, from the melancholy termination of cases of mercurialism in children, which we have witnessed in our own practice. We lost a case from the ravages of mercury on the mouth, in a boy of eight years old, who was apparently recovering from hydrocephalus. Calomel and inunction had both been liberally employed to bring about mercurialism. It has been our lot to see more cases in consultation, than in our own practice, in which death, or mutilation, has occurred from continuing the use of calomel too long, or from giving it in disproportionate doses, in attacks of sickness in children.

One dose of eight grains, united with aloes and rhubarb, brought on gangrænopsis in a boy of ten years of age, who had, several years anterior, been mercurialized. He was of a lymphatic temperament, and was severely affected with hooping cough. Death under the most revolting mutilation of the face took place in two weeks after he took the calomel.

Dry ulceration of the mouth occurs in adults who have been subjected to the mercurial plan of treatment, whilst the vascular excitement is high, or whilst the energies of life are sunk very low. In either catagory stated, the perverted action of the remedy is manifested by a dry tongue, deficient moisture of the mouth, decided mercurial halitus, receding gums, and a tense tumefaction of the cheeks. Foul ulcers quickly form on the tongue, and on mucous membrane of the cheeks and fauces. Sometimes mortification ensues, and the patient rapidly sinks. Such a conjuncture is consecutive upon a too exclusive and excessive exhibition of calomel; when the physician wishes to make it fulfil every sort of depletory, secretant, alterant, tonic, and restorative indication. The lancet is superseded; ipecacuanha and antimony are thrown aside; oil, rhubarb, aloes, are considered useless; enemeta are neglected; cold ablutions pretermitted; counter-irritation regarded as superfluous; calomel is the first, last, and only remedy to be trusted, to be exhibited. This is no hyperbolical statement. The picture has still its counterpart in the ultra mercurialist, who is met with ever and anon along the broad fertile valley of the Mississippi. The method of treatment in both varieties of the dry salivation is as follows: Let the further employment of the remedy be stopped; give tartarized antimony, and nitrate of potash; or even bleed, if the excitement will justify that mode of evacuation; use nitric acid in water, or the sulphate of copper, or nitrate of silver, dissolved, as topical applications; apply a blister over the swollen cheeks; maintain an equable temperature on the surface, by flannel and the use of the warm bath and frictions. The bowels are to be kept open by cremor tartar and sulphur, or castor oil, and if the weather is cold the temperature of the room should elevated. Sulphur, by many superficial observers, is imagined to possess an antidotal power in cases of severe salivation. Its chemical union with mercury in the blood would hardly mitigate its activity. It merely acts as a diaphoretic and laxative. It is an objectionable remedy on account of the great fœtor of the alvine discharges which it provokes.

Chloride of lime, a drachm to a pint of water, or creosote, ten drops to two ounces of water, may be used to countervail the offensive odour, and to stimulate the parts to a more healthy action. Our preference, however, is decidedly for the blue vitriol, bark, and balsam copaiva, in the prescription already recommended. Should a depressed condition of the vital energies be present, instead of the evacuant we must employ an opposite mode of cure. The nitric acid, with opium, or hyoscyamus, will be found useful: Quinine, also, will prove serviceable, either alone, or in combination with camphor.

The aqueous solution of iodine and hydriodate of potash, given three times a day to the extent of five to ten drops in a wine-glass full of sweetened water, is an excellent prescription for mercurial sore throat, attended by constitutional debility, and evident signs of a cachectic habit.

The chronic forms of mercurial disease are paralysis agitans, or shaking palsy; ucerations of the nose, soft palate, and parts adjacent; cutaneous eruptions; phagadenic ulcerations of the skin; nodes; and caries of the bones.

The Trémblément Mércuriel, of the French writers, or shaking palsy in our vernacular tongue, is rarely caused by the medicinal use of metal. Miners, gilders, barometer makers, and glass platers, are liable to it from the inhalation of mercurial vapors. Dr. Darwall, in the London Cyclopedia of Practical Medicine, mentions one instance of this affection in a child, to whom a large quantity of calomel had been given for incipient symptoms of hydrocephalus. Meràt says that even those who undergo mercurial frictions may have it. It appears that salivation exerts a protective power over the nervous system, whilst the constitution is under the action of mercury. Those who are affected with tremours after exposure to the inhalation of mercurial vapors, are never salivated; and those who realize the sialagogue tendency of the drug, are exempted from the trembling. Dr. Christison quotes from his friend Mr. Haidinger the instance of a barometer maker and one of his workmen, who were exposed one night, during sleep, to the vapours of mercury from a pot on a stove, in which fire had been accidentally kindled. They were both severely affected, the workman with salivation, which caused the loss of all his teeth; the barometer maker, with shaking palsy, which lasted his whole life. The attack of mercurial tremours is sometimes sudden, but most commonly it comes on gradually; at first with want of perfect command over the muscles of the arms, succeeded by slight convulsive snatches, and agitations which terminate at length in a tremulous state, increasing in intensity, and extending to the legs, and whole body, if the patient continue his exposure to the cause. The accompanying symptoms of the trembling are arid and unhealthy brown skin, distended belly, and generally a slow pulse; the appetite and digestion are generally good, and sleep sound.

The most expedient dietetic and medicinal treatment of mercurial palsy is such as will invigorate the powers of life. Fresh air, mild nutritious food, gentle exercise with tonics, promise most in this distressing affection.

Constituting the very ground work of that protracted series of morbid phenomena which characterize the chronic mercurial disease as it attacks the nose, skin, throat, joints and bones, is a state of the constitution happily called by Mr. Travers, mercurial cachexia.

Under this head, in his last volume on Constitutional Irritation, that distinguished surgeon has given a case, which, in an abridged form, we shall transcribe.

A respectable married woman, æt. 34, had been, for 10 months, in a country dispensary. Her mouth and nose have been in a diseased state for a period of fifteen months. She has been incessantly taking Mercury, her mouth and gums bearing testimony to the fact. Her invariable declaration is that she never had the venereal disease in any form. A round excavated ulcer appears on the middle of the soft palate, and another on the inner surface of the upper lip. Several small portions of bone have come away, whilst she was under the influence of Mercury.

From 5th of June 1828, the day of her admission into St. Thomas' hospital, to 19th of September following, her condition became gradually more deplorable. The ulceration of her lip and palate extending up to the above date, she presents truly a wretched appearance. The ulcer in the palate has formed a frightful excavation; a great portion of the upper lip has been destroyed by the ulcerative process; her power of articulation is in a great measure destroyed; and her countenance has that pale and haggard appearance, betraying long suffering, and so characteristic of malignant disease, which this was now generally supposed to be. At this crisis it was determined to try the effect of the alterative and tonic action of Mercury. A tenth of a grain of the hydrarg. oxymur. with two grains pulv. conii, in pills, and half an ounce of the extract of sarsaparilla, were given three times a day. Dry lint was applied to the ulcerated surface on the lip, and over that adhesive plaster to make gentle pressure, just sufficient to support the edges.

Her health now made rapid progress; and as it improved, so the progress of the healing was observed to be rapid. She takes wine and porter. October 4th—The improvement in the ulcers is now daily perceptible; the mode of reparation is two-fold, the edges are contracting, whilst granulations are being thrown up in the centre; to take two pills only in the day. The improvements proceeded rapidly to the 24th, when she was discharged well in health; before leaving, she again asserted that she had never been tainted, in any form, or in the slightest degree, with the venereal disease.

This, says the author, was one of those many cases in which Mercury had been largely and perseveringly used, under a mistaken idea that the affection was venereal.

But the mercurial ultraist, who is determined to assert the rights of this all conquering Sampson of the Materia Medica, even whilst occupied in demolishing the very pillars of human health, will, perhaps, triumphantly exclaim,—the secret taint of lues venerea lurked in the system of the patient, and her restoration to health by means of the oxymuriate and sarsaparilla, in the most satisfactory manner, is evincive of this truth. There are three propositions, which embody and condense much truth in relation to this subject. 1st. The ulcerations of the nose, lips, and throat, with the affections of the skin and joints, produced by Mercury, have nothing in them distinctive and peculiar, from syphiloid and venereal affections of the same nature,—where there exists a deteriorated state of the general health. 2d. The cachexia, or constitutional depravity, which Abernethy so well illustrated, is reflected upon the parts assuming the disorganizing process;—the curative plan must, therefore, with predominant and primary aim seek the melioration of the constitutional powers. 3d. Tonic alterants, such as minute doses of the deuto-chloride of Mercury, iodine, the mineral acids, and other available remedial agents, by lessening and removing the constitutional failure, act as the best restoratives of the destroying action, reflectively produced by the cachectic habit of the body.

Local inflammation is the progenitor of constitutional failure, whenever from its nature, extent, or duration, it involves the system and destroys its powers. Functional disturbance of any of the governing central organs of life, will as certainly depreciate the health, as will local inflammation.

Mercury disturbs the nervous function; and it predisposes to constitutional failure by enhancing the susceptibility of the system to the impressions of atmospheric vicissitude. It augments this injurious exertion of its powers over the system, when to functional disturbance, and to the diminished capacity to withstand atmospheric changes, there is generated, by its agency, local affections, such as ulcerations of the mouth. These topical irritations still further encumber and depress the powers of life, and cogently contribute to render a case still more intractable and immedicable.

It may be asked, why if Mercury is productive of these sad derelictions of remedial power, we have little testimony in proof of this perversion of its influence, except in the treatment of venereal affections? Whilst we most cheerfully concede to the justness of the remark, just cited, we are not disposed to deduce from the premises the same illogical corollary, as some of the warm defenders of the comparative innocuousness of Mercury have drawn from the position, thus incontrovertibly assumed.

Mercury is employed in the East and West Indies to a very great extent, as the most successful means of cure, in the diseases incident to those countries. Ainslie assures us that the Hindoos reckon it one of their best medicines, but are very apt, not always intentionally, to induce by its use the most frightful salivations. He enters a caution against its indiscriminate use; and thinks that, "the too common consequences of long protracted and injudicious courses of Mercury in hot climates, is to rarify or make more fluent the circulating fluids, and may have a somewhat analogous effect, perhaps, on the animal spirits, thereby bringing on flightiness of manner and irregular excitement." Such a general and vague mode of demonstrating the evils connected with the remedy are of little utility in our discussion. Dr. Ainslie calls Mercury "a powerful, but debilitating metal," and objects to the use of calomel as a purgative. The great tendency to the skin in a tropical country, seems to render it there more difficult to affect the system with Mercury than in colder climes; I was, on that account, says he, in the habit of advising those *who could do it with convenience*, to remove, during the time they were using it, to some cool situation.*

Dr. James Johnson particularly mentions the difficulty of affecting the mouth with Mercury in a hot climate, especially in hepatic derangement. Other writers notice the same fact, and we know that in our own temperate climate there exists at all times a very great difficulty in mercurializing a patient affected with liver disease. There are then two ways in which the system is protected from mercurial disease in tropical climates; first, by the centrifugal action of heat, determining a sustained movement on the surface; and secondly, by the hepatic torpor so prevalent in diseases of the Indies. Besides, when a patient is treated by Mercury in fever, in liver disease, in dysentery, or in any other malady, but the venereal; whether in a tropical, or temperate region of the earth, he is secluded from the impression of atmospheric changes. And during the administration of the remedy he is watched, guarded, and controlled in his diet, and by his complaint he is rendered incapable of transgressing a proper restriction on the amount of exercise he may take.

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* Materia Indica, v. 1, p. 554.

Then again, the mercurial course which may be instituted is always limited, if not in the quantity of the remedy employed, at least in the period of its administration. But how different are the circumstances, which usually attend the use of Mercury in real, or supposed, syphilis. Precautionary measures are too much neglected; the remedy is prescribed with harsh and impetuous boldness: and pushed to the utmost verge of a reckless indifference to human health. If the patient grows worse under its use, it is too often given with renewed precipitancy to secure "a thorough saturation," of the system. If the patient is affected with either syphiloid, or mercurial cachexia, no perquisition is made as respects the etiology, or previous treatment, of the case, but it is decided that it must be genuine lues venerea, which is alone curable by Mercury. That we do not exaggerate, the following cases, derived from our own experience, will show. In the summer of 1826, a young man of vigorous constitution, being ill with bilious fever underwent a mild salivation. After recovery, and before the mercurial impression had entirely subsided, he exposed himself to a cold damp atmosphere by lying in the evening on a grass plat before his door. This indiscretion was repeated several evenings in succession. In a few days eruptions of a coppery colour made their appearance on his arms and breast. This affection of the skin was accompanied by articular inflammation of the knees and elbows, which in the course of a few weeks was followed by inflammation of the fauces and tonsils. Suppuration in the right tonsil took place, and an ulcerated sore, difficult to heal, was left after the discharge of the pus. The eruptions in about two months disappeared, except about the breast, in which part of the body, they changed into superficial suppurative sores of the skin. These cutaneous, phagædenic ulcerations, were covered by thick scabs, which kept the matter from a free discharge.

With an ulcer in the throat, sores on the breast, arms and thighs, and articular inflammation, which crippled his joints, his case bore the aspect of a true instance of secondary syphilis. But he never had been contaminated by either the syphilitic, or gonorrhœal virus, and he had been recently mercurialized. The treatment adopted was the following—he was ordered to take six drops of Fowler's solution of arsenic three times a day, and wash his ulcers with diluted nitric acid, with opium dissolved in it. This lotion irritated his sores, and aggravated his sufferings. He discontinued my remedies, and took small portions of sulphur, to neutralize the Mercury, according to the expressed views of his new physician. But not recovering his health in the course of a few weeks he returned to his first medical attendant. The arsenical solution was resumed, and was gradually increased to thirty drops three times a day, taken with a tea spoonful of the tinct. guiac. ammon.; the sores were dressed with sugar of lead ointment.

His restoration was gradual, but perfect. Upon exposure to a cold damp air, in a church without fire, late in November, a relapse took place. A tensive unintermitted pain arose in the scalp, with periostitis in the lower end of the radius of the right arm. He was bled several times, with no mitigation of the cephalalgia; took Dover's powder at night to procure rest, which alleviated his pain to a partial extent. He took twice a week a full dose of ipecacuanha to vomit: the compound decoction of sarsaparilla, with thirty drops of antimonial wine, on the days intermediate to taking the emetics, was directed in two ounce doses three times a day, and his diet was restricted to milk and mush.

Under this course, continued for six weeks, he again recovered his health. Four months afterwards, in May 1827, he traveled on horseback to St. Louis. In going to which place he was exposed to the rain, three days before reaching the city. Pains and stiffness of the joints, with sore throat and cutaneous eruptions, returned. A physician of St. Louis was called in, who decided promptly and peremptorily that the disease was syphilitic. In vain the young man protested that he never had any sore on his penis, and that he never had exposed himself to the source of the contagion. That makes no difference, was the doctor's reply, you may have taken the disease on the seat of a privy, or by sleeping in sheets infected by their having been previously slept in by a man affected with the malady; and the virus thus insensibly imparted has crept into your system. So positive and dogmatical was the medical man on this point that he persuaded the patient to submit to a severe mercurialism at once. Large doses of calomel were given, which speedily kindled up a very urgent salivation. But no alleviation of the symptoms followed. With difficulty he reached home in a steam boat. He now tried Swain's nostrum, but after taking half a dozen bottles gave it up, and we were again requested to attend him. Again he took the arsenic and tinct. guiac. ammon. and regained a tolerable state of health. In 1828, he married, and continued to enjoy pretty good health. A few months after marriage he became heated at a fire, and was thoroughly wetted by the engines. A partial relapse of the disease occurred, but by the use of the remedies, he was again restored. In January, 1830, we visited him at the request of his brother, a respectable physician, who in consultation insisted on the necessity of another salivation. Disagreeing very widely on the pathology and treatment, we did not meet again. The mercurial plan was prosecuted with vigour for weeks, that the last and least remains of syphilitic impurity might be extirpated from the blood and bones of the unfortunate fellow. But the case proved irremediable under that methodus medendi. Finding himself growing worse, for in addition to lameness of the right knee, and a cutaneous efflorescence, his nose became ulcerated, he applied to a nostrum monger, who pretended to cure mercurial disease by a specific. Again the poor man was subjected to the salivant influence of Mercury, under which repetition of the agent he lost part of his nose, and most of the bony palate of the mouth. With reiterated assurances on the part of the vapouring imposter, that he would bring all the Mercury out of him, he grew worse, till phthisis pulmonalis closed the scene.

The secret remedy employed by the empirical adventurer, who conducted the above patient to his grave, was composed of forty one grains of calomel, twelve grains of rhubarb, and two grains of opium. This was given every night till the Mercury in the system, according to his avowal, was forced out by its antidotal power. Pearson well remarks, "although there are many who pretend to exclude Mercury from their nostrums, yet their perfidious declarations are betrayed by the salivating quality of that mineral, which in defiance of every disguise and combination, will appear to the detection of the impostor."

Can there be the shadow of a doubt, resting on any unprejudiced mind, that the above recited case, was one of mercurial disease; that the symptoms from first to last were generated by the perverted action of the medicine administered, during fever in the first instance, and afterwards re-administered with blind temerity at three different periods. If such a history does not authenticate our position, in reference to the constitutional morbid effects of Mercury, we must surrender the whole ground of causation up to the reign of chaos, and contradiction, and in despair abandon all hope of discovering the true etiology of disease.

Let us give another instance in which there was no venereal affection to complicate the nature of the case. Two winters ago we treated a married gentleman, who had an ulcer on the external part of his nose and caries of the palatine arches. This gentleman declared most positively that he never had lues venerea in any form, and that his present condition was induced by his taking the fourth of a grain of corrosive sublimate, every four hours, for a number of days, to cure liver disease. Soon after taking the remedy he was much exposed to the weather; his throat became sore, and a severe pain in the head arose, not long subsequent to his exposure. Every other means failed to cure him, till the arsenic and powdered sarsaparilla in ten grain doses, were perseveringly employed for several weeks.

Carmichael has, in his "Essays on Venereal Diseases," given well marked cases illustrative of the evil consequences of pushing the mercurial practice, particularly in that variety of the venereal termed by him, phagedenic. In consultation on case marked in his work 29, a surgeon of long experience and extensive practice, observed, that in his day practitioners had but little perplexity with cases of an ambiguous character, for that they persevered in the use of Mercury whatever were its effects, till it solved every difficulty by curing or killing the patient. And we regret that the same false and mischievous mode of arriving at a conclusion on this point is so much practised in the profession in some portions of our country. Should there exist any doubt, as regards the correctness of our declaration, that it may be dissipated, we submit several more practical exemplifications.

A young gentleman was affected with symptoms of syphilis, for the removal of which a large quantity of mercury was given. The disease yielded completely under the salivation thus rapidly brought on. This was in the summer of 1831, a few months before his marriage. Several months after his marriage, upon some exposure to the weather, his throat was attacked with inflammation, and superficial ulcerations appeared on the surface of the chest. The physician who was consulted advised blue pill, given in such doses as to procure ptyalism. But the symptoms were aggravated by the mercurial influence. Another physician was called in, the first having been dismissed, and he actively depleted him by several sanguinous evacuations, nauseants, low diet and purgatives. On November 13th, 1832, we were requested to meet his medical attendant in consultation. We found his physician very decided in his pathological views of the case, and resolutely bent on fulfilling the therapeutical indications built on his conception of the nature of the morbid action. With a warm espousal of Broussais' doctrines, in our conference, on theoretical abstractions he established his practice, although he admitted that the disease was entirely mercurial. The condition of the patient was replete with danger. He was confined to bed, very much emaciated; with ulcers on his back, breast, arms, and legs; his throat was inflamed, and the glans penis was affected with a deep spreading sore.

His wife was a lady of a refined and cultivated mind. By profession he was a lawyer, and a young man of promise and great respectability. There could no suspicion attach to the communication of a new infection after matrimony. His wife was not affected by symptoms of disease of any kind. The sore on the penis made its appearance after the second course of mercury. The case progressively advanced from bad to worse, till death released him, in about three months after we saw the case, from his sufferings.

Twenty-five years ago our attention was called to the secondary form of mercurial disease, by the occurrence of a case of deep interest. A clerk in a store contracted a chancre, and was put immediately upon a mercurial course. He took calomel in grain doses every night and morning, and rubbed in the strong mercurial ointment along the inner part of his thighs twice a day. No precaution was inculcated by his physician, as to his diet, or manner of living in any way. He drank from a pitcher frozen water, placed at the head of his bed every night, and slept in a room with a pane of glass out in the window near him. Sore throat came on, with severe pains in the joints. The calomel and inunction were persevered in with augmented earnestness. He became worse—pain in the head, nodes on the skin and bones, and ulcers on the scrotum and dorsum of the penis, were added to the other symptoms. His mouth was not affected with genuine salivation during the six weeks in which he submitted to the above treatment.

Abandoning his first physician he was afterwards treated for several months for mercurial disease. Extract of conium, and compound decoction of sarsaparilla, were the remedies principally relied upon. The irritability, physical and mental, of the patient was of extreme severity. Large doses of the cicuta were demanded to mitigate it. But little melioration took place in the symptoms till the patient went to New Orleans; there his general health improved, and the sore throat, articular infflammation, and ulcers, improved, but did not disappear. Afterwards, he assured us, that he was permanently cured by putting a pound of gum guiacum into two gallons of water, and boiling down to a gallon; of which he took a quart a day till the disease was cured.

We might multiply similar cases, derived from our own observation, but we forbear, as a sufficient number in the way of illustration have been adduced.

With these facts before the mind, it would appear difficult for prejudice itself to escape the conviction, that mercury is capable of producing syphiloid affections—that is, morbid actions simulative of syphilis, of the throat, and parts adjoining, of the bones, and of the skin. The treatment most successfully pursued by us in such cases, has been the following.—The regimen is a matter of moment; the patient must be restricted to a bland, nutricious diet; he should avoid tea, coffee, and all stimulating drinks; flannel, or cotton, garments should be worn next the skin; a regulated temperature should be maintained in the apartment, and exposure to a damp cold atmosphere, or to currents of air, must be avoided. The great point is to sustain an equable action on the general surface of the body. The warm bath and tepid drinks will be found conducive to this result.

The indications of cure, are: 1st, To abate morbid irritability; 2d, To promote the functional activity of the skin; and 3d, To alter the perverted action existing. By a combination of such remedies as are coincident in their influence to the attainment of these ends, we shall arrive at the perfection of therapeutics in such cases. The remedial agents which abate morbid irritability are generally selected from the class of narcotics, but for the irritability intimately associated with a cachectic state of the body, tonics are found to fulfil that indication to a degree which anodynes alone would not reach. In some instances cicuta is found useful; it may be administered in doses of two to thirty grains several times a day. Dover's powder answers well, where there is sleeplessness. But the plan generally found most available is the persevering employment of Fowler's solution with powdered sarsaparilla. We begin with five drops of the arsenical solution, and gradually increase the dose to thirty, or even forty drops, three times a day, till some degree of nausea, and pain in the head, warn us to stop it. Ten or twenty grains of good sarsaparilla, are to be taken with the solution. Sometimes the tinct. guiac. amm. is substituted for the powdered sarsaparilla. A tea spoonful of the tincture is given, with the Fowler's solution, three times a day, in ginger syrup, or sweet wine.

Should there exist an inflammatory diathesis, which however is a rare coincidence in such cases, we direct the patient to drink a mild decoction of sarsaparilla and dulcamara, or sassafras, to the extent of a quart a day, with two grains of tartarized antimony in each quart. The bowels are to be kept open by the compound extract of colocynth, combined with the extract of cicuta, or hyoscyamus; five grains of the first with two of the cicuta, or one of the hyoscyamus, given at night will generally answer. A larger proportion of the anodyne may be proper, where much morbid vigilance obtains. The ulcers are to be dressed with dry lint, or basilicon, having ten grains of sulphas cupri incorporated with each ounce; or washed with a mixture of the sulphate of copper, balsam copaiva, and Peruvian bark.

Iodine alone, or united with the hydriodate of potash, has been advised in such cases as those described above. The alterant power of the oxymuriate of mercury has been relied on by many respectable practitioners to procure a radical cure in every variety of ambiguous, or syphiloid constitutional disease. The arsenic and powdered sarsaparilla have proved so successful in our hands that we have never resorted to the corrosive sublimate. Where a scrofulous predisposition exists the iodine is an eligible tonic alterant. Where the ulcerated surfaces are very irritable, an ointment composed of ten grains of the nitrate of silver, five grains of powdered opium, a scruple of the extract of cicuta, and an ounce of simple cerate, will prove very useful.

[No. 2.]

REPORT ON AUSCULTATION AND PERCUSSION.

To the Medical Convention of Ohio:—

The committee to whom the subjects of Auscultation and Percussion were referred, beg leave to submit the following report. Among the improvements in medicine to which modern physicians may urge their claim, perhaps none rank higher in importance than Auscultation and Percussion. Considered as a means of diagnosis in a class of diseases the most difficult, demanding the skill of the physician, we cannot but congratulate the profession on the high degree of perfection of the means employed, and the certainty which marks the results of their application. From the standing and reputation they have acquired, it may seem to be an act of supererogation to say any thing of their merits. But when we reflect, that in our western country the profession exists widely scattered, and have imbibed the impression that it is time thrown away to attempt to avail themselves of a knowledge of physical exploration, and that none but those who have had extensive hospital experience can be benefited by it, we feel called upon to urge its importance, and endeavour to show that practitioners in the country, by improving their opportunities, may draw some of the most satisfactory decisions in regard to disease. Bertin, in speaking of the obscurity of diagnosis in diseases of the heart by means formerly employed, holds this strong language: "Auscultation," says he, "in creating for us as it were a new medical sense, has at length succeeded in dissipating this long continued darkness. In the present day, instead of the eye we employ the *seeing ear*, if we may be allowed the expression: which, if attentively applied, collects all the symptoms of the heart's motions, and renders the diagnosis of the diseases of that organ as easy and as sure as that of the chirurgical diseases the best known. Universal respect therefore is due to the ingenious observer who has enriched medicine by the discovery of a mode of exploration, the precious and fruitful results of which we take pleasure to record." The application of these means is founded on the immutable laws of physics, never varying, always the same in its results, and fallacious only from the imperfection of our own senses. Not theoretical, because founded on observation and known physical rules, similar conditions of the organs producing similar results. As sounding for stone in the bladder is of importance in surgery, so of Auscultation and Percussion in the practice of medicine. To prove their truth, it was not necessary that either life or health should be endangered; but it is simply the application of means for the purpose of adding to our too limited knowledge in diagnosticating disease. Accurate diagnosis must be considered as essential in controlling morbid action; or in other words, we cannot successfully treat disease unless the nature of the disease is clearly made out. In fact we cannot, without blindly groping our way in the dark, proceed one single step without it. Whatever then increases our knowledge on this subject, should be hailed by every friend of the human race as the harbinger of greater success in the practice of medicine. Percussion was first introduced and practiced by Avénbrugger, a close and observant physician of Vienna: he confined his use of it to diseases of the chest, and always employed immediate percussion by tapping lightly on its walls. This was about the year 1760. For near half a century it laid dormant, until resuscitated by Cowisart; who might have laid claim to original discovery; but with a magnanimity truly worthy of this great man, he contented himself with translating the works of Avenbrugger and calling attention to them. The application of mediate percussion was introduced by M. Piorry, and has many advantages over the immediate. Notwithstanding percussion was known and practiced in 1760, it was not until the recent period of 1816, that Auscultation was discovered by the immortal Laennec. Like all new improvements, too much importance may have been attached to it, to the exclusion of other means. But it is when united with percussion that its greatest value is apparent; neither can be so beneficial without the other as when combined with it; they serve mutually to increase our knowledge of organic change; and to separate them, materially detracts from both. It is strange to us that so simple an application of physical phenomena should have remained so long neglected. Objections have been raised, that the knowledge obtained by physical exploration only gives us information when it is too late to apply with success remedies for the cure. This objection, if ever made by a physician who has kept himself informed of the history of his profession, must have been at least wholly ignorant of this important means of diagnosis. Admitting this to be the fact, which is far, very far from the case, even this knowledge may be all important. It may be of the utmost consequence, for instance, to know that Phthisis Pulmonalis does or does not exist; negative symptoms are sometimes as beneficial as positive ones. How frequently do we find physicians differing in opinion, whether the patient is affected with phthisis or not. How often the solicitude of parents and friends may be relieved by important negative symptoms; for if there is an absence of the signs of phthisis, it must be at once admitted that it cannot exist. And if they are present we know it does exist, and the case is then relieved from its obscurity at once, and we are so far informed of the real state of things. Diseases of the digestive organs, often simulate diseases of the lungs, so far as the functional signs indicate; and physical examination alone can set us right. Of course remedies applicable to diseased lungs may be very inapplicable to diseased digestive organs. That Auscultation and Percussion afford no positive information except in incurable cases, has been said to be far from the truth; and were it not that we have heard this assertion, and that from some members of the profession who would not wish to be considered behind the intelligence of the day, your committee would not, at this period, have thought it necessary to say one word in defence of auscultation and percussion from such attacks. To say they are useless, would be to say that most of the diseases of the lungs and heart require the same treatment, and that diagnosis is utterly worthless; consequently, disease of those organs ought to be described merely as a disease of the chest, and subjected to one common treatment. Surely no physician worthy of the name, will consent to this. Again, no intelligent man in or out of the profession, but what will say, that our means are already too scanty in furnishing data for accurate diagnosis. Even in simple inflammation of the lungs, the aid is immense, and it is impossible frequently to say, from the rational signs alone, whether or not it exists. Dyspnœa and bloody expectoration were formerly thought to be the pathognomonic signs of this disease: but any one acquainted with the physical signs, knows that these may be wanting and yet the disease exist. Another obvious advantage in this, as well as in other diseases, is, that from day to day we are informed what is the effect of our remedies, the situation of the disease, whether it increases, diminishes, or is stationary under our treatment. It is also well known by physicians skilled in diagnosis, that the symptoms of dyspnœa may depend upon very different diseased conditions, and that in cases where this symptom existed as a prominent one, it was formerly called asthma; and they need not here be reminded how vague and unsatisfactory has been the treatment. Now that this vague generalization has been supplanted by correct views, it is found to be a symptom of a great many different diseased conditions, requiring a corresponding diversity of treatment. Formerly, all diseases of the heart were described and treated of as one disease; but it is now well ascertained, that while some of the diseases of the circulatory system require active depletory measures, others again require the use of tonics, such as iron, quinine, &c., and that these different conditions can only be detected by physical exploration.

In the treatment of fevers, the aid rendered by physical exploration is very important. Many cases of fever are rendered mortal by the intervention of pneumonia and other diseases of the chest, whose insidious approach is only recognized by means of the physical signs; and by these signs their onset, progress, and severity, are told as faithfully as though they could be recognized by sight. In diseases of the abdomen, percussion cannot be dispensed with and give the patient his best chance for a recovery. An inflammation of the left lobe of the liver may easily be confounded with acute gastritis, and vice versa. Enlargements of the viscera of every kind can almost always be detected without a possibility of error, as every region of the abdomen has its peculiar sounds on percussion in a healthy state, and these sounds are changed corresponding to diseased conditions. There is no case however, that physical signs are of more importance as a means of diagnosis than in pregnancy. Other signs are known to be very fallacious and perplexing, while in these we have a certain means of ascertaining the fact, worth more than all the uncertain signs ever brought into use for the purpose of effecting this object. And the knowledge so obtained is not only conclusive in determining whether pregnancy exists, but also in ascertaining with certainty whether the fœtus is alive, which in cases of preternatural labor may have important bearings in modifying our practice. For instance, no physician would for one moment think of performing the cæsarean operation when the child was dead; unless the diameters of the pelvis were contracted to less than two inches. Neither in difficult labors, where there is a great disproportion between the size of the head and the capacity of the pelvis, and the child dead, (clearly and carefully ascertained by means of the physical signs,) would he hesitate to terminate the labor by the perforator and crotchet, if the diameters of the pelvis would permit, and diminish the hazard of the mother when it can be done without injury to the child. The consequence of correct results in diagnosis, when an error may affect the health, life, and reputation of us, as human beings, appear to the committee too obvious to require comment. And that we have, in Auscultation and Percussion, the means of arriving at correct results, we think cannot for one moment be doubted. In fact, as remarked by Professor Jackson, of Philadelphia, "The investigation of diseases, by their physical signs, has become one of the established departments of diagnostes."

The next important matter is, can physicians, in country practice, become acquainted with physical exploration so as to be of any use to them? We answer, decidedly, that they can. To effect this object, we must bear in mind that this art is not intuitive, but is the result of study and close observation; one that has principles and relations not less important or precise, than that of music. When we would prosecute this study successfully, we must become acquainted with its elements; learn the simple and plainest sounds, and then proceed to the more complicated and less strongly marked. But first of all, let the student carefully make himself acquainted with the normal sounds, before he commences with the abnornal. He will then have a point for departure in his observations; and before he can distinguish unhealthy sounds from each other, he will have learned one very import matter, namely, to distinguish the healthy from the unhealthy. From this, he may proceed in his analysis of the unhealthy, and examine them in their relations to diseased conditions. Here, then, commences the practical application of Auscultation and Percussion, in diseases. The morbid sounds may be classed into, 1st, Alterations of the Respiration. 2d, Of the moist Rhonchi. 3d, Of the dry Rhonchi. 4th, Of the Voice. And of Percussion, it consists principally in alterations of the sonorousness of the part percussed, and is characterized by various degrees of flatness, dullness, increased resonance, &c. In the first class, strong bronchial or tubal respiration, and cavernous respiration, stands at the head of the list. To acquire this, a patient with pneumonia and advanced to about the 6th or 7th day, should be selected. Cases of this disease are sometimes so well marked, that it can be detected without doubt by the functional signs alone, and cases of this description should always be the ones selected. By applying the ear to the posterior part of the chest, between the scapula and spine, the blowing sound on inspiration and expiration, but especially on the latter, will be distinctly heard, and which is the strong bronchial or tubal respiration. Having now got this sound fixed in the mind, and its relations to diseased conditions, the various modifications of it can be learned in the same manner, together with their corresponding developments of diseased actions. We merely give the above as a specimen of the mode of proceeding, and for the particulars in this, as well as of the other diseased sounds, refer the members to works devoted to this subject; and we would recommend as the best in our country, "Gerkard on Diagnosis of Diseases of the Chest," and "Raciborski on Auscultation and Percussion." These works are so full, that any person engaged in practice, by attending to their directions, may become sufficiently skilled in physical exploration, so that he may reap an immense advantage from it in practice. And it certainly behooves every conscientious physician to avail himself of all means in his power, by which certainty of doing good is added to the present scanty resources of our art.

Committee, { George Mendenhall, *Chairman.*
R. L. Howard,
C. D. Brayton. }

[No. 3.]

ADDRESS ON MEDICAL EDUCATION.

BY DR. J. P. HARRISON.

The subject of the reflections about to be submitted to your consideration, is of great magnitude to the best interests of our profession. After much investigation, the conclusions of my judgment on this difficult, and perhaps rather invidious topic, are offered for the candid deliberation of the most enlightened minds of my fellow practitioners of medicine.

The topic is perhaps rather invidious, on several accounts. And first, the speaker may expose himself to a comparison with his own standard, by which he may be disparaged, from his falling so far short of even his own criterion of professional excellence. Or he may expose himself to the unjust imputation of seeking to aggrandize himself by a too flagrant exposure of the defects of medical education in others, who perhaps occupy prominent positions in society. Or, it may be that suspicion shall be awakened that some of our remarks are intended to depreciate the profession generally, and to throw discredit on the opportunities of acquiring medical knowledge, presented in our country. To all these, and similar objections, should any such be made, we reply,— that our object in the discussion of the subject is the same that has brought us together in this convention —*the good of the profession.* Conscious of our own need of improvement we freely urge upon others their deficiencies, and having experienced, as a private preceptor, as well as a public teacher of medical science, how difficult, nay, we might add, how impossible, it is to preserve inviolate our most deliberate convictions of duty, on a point where general concurrence of action in the profession does not obtain, we have the more freely appealed to our professional brethren for a more energetic and pervading spirit to be put forth, in order that the evils expatiated on may be removed, and the profession thus redeemed from the sore and oppressive burden which at present weighs it down.

The subject of medical education, taken in its most comprehensive scope, may be divided into two distinct heads: 1st, As to what kind of preparatory mental training a young man should be subjected, in order to qualify him to enter upon the study of medicine; and 2d, What strictly technical or professional acquisitions should he be in possession of, before he is properly fitted to exercise the responsible duties of a medical practitioner.

A superficial glance at the first head, will show a liability of committing one of two opposite errors in our speculative, as well as practical treatment of the matter in hand.

The standard of elementary education may be lifted too high, so as to render a compliance with its requisitions almost hopeless, from the severe and almost impracticable demands made upon the time, talents, and pecuniary resources of the student. Or, we may so bring down the preliminary intellectual culture as to derogate from the character of the profession, by stamping a paltry and ignoble spirit of meanness on the art of healing.

Whilst medicine is essentially a practical avocation, and requires sound sense and an experienced tact to fulfil its every day duties of discriminating and curing diseases, yet it is susceptible of diversified embellishment from the contributions of science, and from the ornaments of literary culture.

In this country there seems but small liability to one extreme, in education—that of exaggeration, in the amount of classical erudition.

We are incessantly tempted to forego the advantages of high and varied learning, for the more seductive baits of immediate profit. This applies to medicine in a most emphatic manner, and every day furnishes mournful attestations to the truth.

It may be plausibly urged, that life is short; that the field to be explored is of vast amplitude; and that there are such urgent demands in our country for physicians, that young men should not loiter long on the road, waiting to be better prepared for the ministry of healing—but should, with all available speed, come forward on the arena of active life.

All this, and much more, akin to it in soundness of logic, may serve to apologize for that indolence which wishes to reap where it has never sown, and for that ignorance which would riot on the rewards of knowledge. On the very debateable point, what degree and kind of preliminary education should a young man receive, that will duly prepare him for the study of medicine, we shall submit some remarks, which will not, we trust, meet with any opposition.

That a certain training of the faculties must be had before the mind is properly fitted to prosecute the difficult investigations of medical knowledge, cannot be controverted with any show of legitimate argument. The mind, like the body, requires use in the exercise of its powers, before it is adapted to enter upon any task of severe effort. The capacities of the intellect, previous to cultivation, are sluggish, stiff, and indisposed to exertion. The mind must be made alert, flexible, and apt to exertion, by the previous training of its school-boy exercises, before the complex scheme of medical education is entered upon.

No young man is properly prepared to study medicine, who is not a good English scholar. The correctness and extent of such scholarship should be tested by his ability to speak and write with accuracy, his native language. It is a melancholy fact, that there are medical practitioners, and some, perhaps many of them, graduates in medicine, who are ignorant of the English grammar, and whose attempts at speaking, and especially in writing the language, are marked by shameful, or rather shameless, violations of every rule of correct composition.

What can be expected of such medical aspirants, who have neither sensibility to feel, nor honorable ambition to rectify the deficiencies of early education; and who crowd with blind and stumbling haste the portals of the temple of Esculapius! Abandoning perhaps, from want of success, some other avocation, they push their eager way into the ranks of the profession, without any just appreciation of the degree of mental toil requisite to compass its principles, store up its many facts, and make available its opportunities of usefulness in relieving human suffering. Every sober minded observer of the varied distributions of human industry will concede, that no benefits can redound to society from the medical profession, unless men are duly educated to their work. A body of men must consecrate themselves to the special functions of this calling. They must give their best efforts to its great and responsible duties. Time, money, industry, and intense thought are required, to fit a man for this sphere of active life. It is a disgraceful misconception on the part of many, that to be a practitioner of medicine a young man may hurry through a crude and superficial school training, and with precipitate steps pass through his medical studies, and in a short time possess all necessary qualifications for the practice of medicine.

What subsequent intellectual culture can be expected, of one who is not in possession of sufficient elementary knowledge to enable him to pass onward to higher degrees of mental effort?

No achievement in scientific research can possibly be made by one whose mind leads him to repose in such low grounds of inactivity and ignorance. Who can expect such a one to entertain any stirring impulses, for the improvement of a profession which he estimates at a rate so low as to think that ignorance and presumption are the best passports to its highest walks?

But we presume that no one will attempt the defence of such arrogant folly, as that which urges a young man to commence the study of medicine, so inadequately prepared as to be incapable of speaking and writing his own tongue correctly, and who is unacquainted with the other essential rudiments of a sound and accurate English education.

Much disputation has obtained in this country, on the expediency of classical learning to qualify a young man for the study of medicine. Whilst we admit that the study of medicine can be prosecuted with fair prospects of usefulness, and some degree of reputation, by a young man of good English education, yet the great utility of classical learning in storing the mind with ideas, and in disciplining the faculties to persevering, patient inquiry, commends it highly to our consideration. There is assuredly no danger, in our country, that the youthful mind shall become too enamoured of the lore of Greece or Rome; then why should we depreciate the advantages of such literary accomplishments, or attempt to dissuade from a danger which is perhaps altogether imaginary, or at least of very remote approach?

Every encouragement is needed, to urge the young men of our country to a more diligent and ardent pursuit of classical learning. We should not speak disparagingly of the treasured excellencies of thought, and prolific elements of intellectual power, found in the glowing pages of Grecian and Roman literature. Let there be every opportunity given to our aspiring young men, who intend to prosecute the study of medicine, to have their minds thoroughly imbued with the rich infusions of classical learning; let them come fresh from that exhilirating fountain of mental energy, to the peculiar studies belonging to medicine, then will they be prepared to go onward with a bold, animated, and persevering movement.

In the education of the intellectual powers, two principal ends are to be kept in view; first, the most advantageous developement of these powers themselves; and second, the communication of the greatest amount of knowledge, capable of being brought into useful application. In the successful prosecution of any branch of scientific study, the mental powers should, by previous discipline, be prepared to grapple with difficulties, and overcome them. Classical study cultivates a large portion of the faculties, by a simultaneous action on many distinct powers and tendencies of intellect. The command of attention demanded, and the ready and capacious memory, with the exact and delicate discrimination, and judgment in the application of principles and in the choice of words produced, highly commend classical literature to our regard. Besides, there is created in the mind, by such studies, an aptitude in the conception of things as a whole and in their details, which imparts a facility in combining simple, and analyzing complex ideas. The cultivation of the taste and imagination, is one of the constant results of classical study.

A clear and correct understanding of the force of words, is of the utmost consequence in every period of the intellectual progress. On the care which is early taken in furthering this object, depends in a great measure the future developement of the understanding, and the acquisition of knowledge. Definiteness and propriety in the use of words, so necessary for the communication of knowledge to others, and for the reception of it ourselves, are among the most valuable fruits of a classical education.

Our profession in this country is greatly deficient in literary culture. Few among us are found contributing to the advancement of the science by original, well written works. We have relied too much on foreign minds to write for us. Our medical literature is too ephemeral, too much made up of hasty essays for medical periodicals, and which, though deserving of high praise, should constitute but a very small part of that abundance which ought to characterize it. Translations, abridgments, and republications with commentaries, to give them the air of American works, are crowding our shelves, whilst here and there is seen an original production from some of our own distinguished physicians. And unhappily, the latter are too often little else than hastily written works, mainly derived from foreign sources, with little original research on their pages.

We ascribe much of this neglect on the part of American practitioners in cultivating a habit of communication on medical subjects, and an almost total reliance on foreign authors for light on topics relating to the science of medicine, to their deficient academical instruction. To unfurnished and undisciplined minds, the study of any science is replete with repulsive abstruseness. Apprehensions of mysterious difficulty beset the very entrance on the path of severe study, to a mind whose powers are thus loosely compacted together. Mental toil cannot be borne, the attention flags, and the power of recollection is weak. And now finding too late, that he has entered upon a course of study difficult and complex, and that he cannot master very readily its higher principles, he abandons all hope of distinction in the profession, and all his thoughts turn upon the very humble object of gaining a livelihood by dispensing the familiar articles of the materia medica.

Should such a one become a practitioner he can practice cheap, for neither his scholastic, nor professional education has required of him much time, means, or industry. If he desires to pass through his pupilage rapidly, he can do it by reading a few common works on medicine; learning the names and doses of a few medicines, and receiving the name of doctor from the good people around, and forthwith a doctor he becomes. If he cares for a diploma, to act as a talisman in keeping off the abusive term *quack*, all he has to do is to hurry to some accommodating school of medical instruction, and there be made a regular doctor, according to law, and to the authority of the magnates of the profession. This is not written in the spirit of exaggeration, or with a view to inflict a wound on our profession. Already have the same truths been proclaimed from the highest places of professional influence in our land.

The Surgeon General of the United States in his last Report to the Secretary of War, employs the following strong and pointed language on this subject.

"The law requiring an examination of candidates for appointment, and of assistant Surgeons for promotion, in the medical department of the army, has been rigidly enforced.

"Of the thirty six applicants who were invited to appear before the board, twelve declined the examination, (two, after having reported to the board,) two were excluded on account of their age, and twenty two were examined; and of these last, five only were found to possess all the qualifications essential to an appointment.

"It may be that we have erected too high a standard of merit—that too much is exacted from the human intellect; we are not conscious, however, that more has been asked than ordinary talents, a good primary education, and the actual study of the science of medicine can attain.

"But to account for the humiliating result of the examination on the present and on the former occasions, we have only to look to the system of education which now obtains in the country.

"The facilities of acquiring medical knowledge, or rather of becoming professional men, are so great, that many persons are seduced into an attempt to become physicians, without the basis of an education. The great multiplication of medical schools in every section of the country, together with the proverbial facilities of becoming licensed practitioners, has so lowered the standard of professional excellence, and so manifestly degraded the medical character of the United States, that the present system will be, it is to be hoped, by a more enlightened public opinion ere long put down. The interests of the country are so much divided by these various institutions, and the patronage to each is consequently so small, that many of our ablest medical men will not accept places in them; were it practicable, however, for the profession to obtain adequate compensation for their services, it would be impossible to find professional men enough of talents and attainments to occupy the several chairs in the innumerable medical schools in every town, village, and cross-road place, throughout our States and Territories."

This apparently harsh condemnatory language is too justly applicable to the state of things existing in the medical profession in these United States. It should awaken every conscientious practioner of medicine, who feels for the honor of his profession, to a consentient action on the subject. The question what can be done to meliorate this lamentable condition of the profession should receive one united response—let every young man who designs to prosecute the study of medicine receive a good primary education, then will he come adequately prepared to enter upon his medical studies with a hope of doing credit to himself and reflecting honor on the profession. If he is deficient in the fundamental branches of a sound English education, let him abandon all his ambitious projects of becoming a doctor in medicine, until he has by persevering industry supplied his obvious wants of due preparation. Nor let him deem this a hardship, for if his bosom glows with any aspirations after excellence in that active sphere of duty he wishes to fill, he will not regret that the foundation of his future eminence has been thus securely laid in a sound literary culture. If deficient in the rudiments of a substantial primary education, he will be exposed through all his professional life to the severe mortification of being sneered at for his ignorance, and can never advance the interests of the science, nor reflect credit on the profession, of medicine.

His professional avocations will bring him in familiar collision with the best cultivated and most intellectual portions of society; how deep then must be his chagrin, if a man of any ingenuous nobleness of soul, to have the finger of derision pointed at him as an illiterate dispenser of drugs, as a mere drudge in the more humble walks of the healing art!

Let every young man who intends to study medicine have his thoughts fixed on the dignity, excellence, and usefulness of this ancient and beneficent calling. The character, objects, and purposes of the science of healing are of the most elevated kind. The whole nature of man, in his physical, and intellectual being—is the subject, scope, and termination of our science. The intricate, and admirably adjusted, mechanism of his body, with the evolutions of activity constantly going forward in every part of the organism; the mysterious connection of the corporeal frame work with the ever restless spirit; the causes operative in the production of disease, with the remedial agents which art has devised for the restoration of health; the multiplied forms of morbid action, with their distinguishing symptoms and the essential changes of the tissues which produce them—all demand the highest and most strenuous efforts of mind to comprehend, master and digest into a consistent system of scientific truth.

There are three points of view, in which medicine may be contemplated, first, the technical part of the science,—secondly, the facts of the science—and thirdly, the principles, or doctrines, as deduced from the facts.

The technical terms of medical science are numerous, and require patient and protracted exertions of the memory to treasure them up for familiar use. It may be said that medicine can be stript of its terminology—that nosological distinctions are idle and misleading—and that it becomes us in these times of reform and of the march of mind, to disincumber the science of all such impediments to its more rapid progress in the road of truth, and reduce it to a more simple, and readily comprehended scheme of investigation. A little reflection will convince any thinking man that such remarks are grounded not in a proper judgment of the nature of the diversified objects about which medical science is conversant. An accurate vocabulary subserves three valuable ends—1st, it enables us to distinguish separate facts or objects—2d, it furnishes an instrument of more precise and analytic thought—and in the third place, it is the only medium by which our own accurate conceptions of truth can be conveyed to other minds. If each separate bone, (of which there are 248,) and muscle, (of which there are 400,) and if every important nerve and artery, and each distinct organ, and part, must be described and designated, how can Anatomy be cultivated and understood without a copious and varied vocabulary? If the many pathological changes to which the organs and tissues are liable in the numerous diseases to which man is subject, are to be appropriately classified and studied, how can we disregard a nomenclature designative of such deranged structures? If each remedial article is to be described, its botanical, chemical, and medicinal properties noted down and appropriately dwelt upon, how can materia medica be scientifically cultivated without numerous terms. And if there are various forms of disordered action, if all disease is not a unit, then must we have a refined nosology to point out and discriminate diseases. To be philosophically studied, medicine must have a copious, well arranged, and well digested system of nomenclature. No one can properly be entitled to the appellation of an enlightened scientific physician, unless he becomes familiar with the terms of the science. It is contrary to the very nature of the human mind, to entertain the presumptuous idea that a man can know and accurately distinguish things without appropriate terms of designation for each and all the objects of his knowledge. He may forget some of the terms by which he distinguishes objects, but this very forgetfulness he daily finds acts as a hindrance to his ready reminiscence of the objects of his knowledge.

The second point in the science of medicine, to which reference is to be made, in a due allotment of its appropriate divisions, is the great mass of facts which the collective talent and industry of its cultivators in different ages and countries, have accumulated. These facts are spread through the departments of anatomy, physiology, materia medica, chemistry, and the practice of medicine. Time, talents, and labor, are required to treasure these facts up in the mind, and aptitude, and vigour of thought are demanded to enable the student to wield them adroitly and appositely, else they confuse, embarrass, and oppress his faculties. Principles therefore, deduced from these facts, must first be inculcated, that the student may more readily comprehend, and successfully marshal the vast array of facts presented to his mind, in the several departments of the science. The science of medicine, as taught in our standard works and by our most distinguished lecturers, is most generally taught in a dogmatic way. That is, the doctrines, or general deductions, are peremptorily laid down, and the facts adduced as verifications of the positions taken. Thus, in anatomy, general divisions are made of the system, and in a systematic order the bones, muscles, viscera, nerves, and vessels, are described. It is plain that science reverses the order of things as far as the common perceptions of the mind are concerned, in arriving at a knowledge of the structure of the human body. The common observer would naturally infer that the exterior parts should be first submitted to e amination, and then in consecutive succession, the organs as they lie in tiguity to the surface. But the scientific anatomist, having deduced g conclusions in reference to the organic relations of the parts he is to proceeds in an arbitrary order to make a thorough exploration of every portion of the structure.

Diseases are arranged in a systematic method—in accordance to their more general, and particular analogies and relations to each other. The teacher has to take certain dogmatic, or arbitrary, positions in his discussions of the virtues of medicinal substances, determining that some are to be arranged under the head of emetics, some under the head of cathartics, and the rest under the various other divisions designated in our works on materia medica. These illustrations are sufficient to show that the science of medicine, though emphatically one of facts, is still dependent for its present existence, and derives all its hopes of future advancement on a lucid nomenclature, and on its general principles. It cannot be taught or understood as a physical science without an accurate, comprehensive terminology, nor can a student make any advancement in it without he is first indoctrinated into its general principles.

Both the analytic and synthetic methods of investigation should be employed in the teaching of medicine. That is, general positions are to be taken and substantiated by a citation of facts, and facts are to be presented to the mind and senses of the student, and he is to be aided in drawing deductions from them. Neither method, exclusively followed, will answer,—they should be interchangeably employed. If we depend on the analytic mode of teaching altogether, we are apt to make our students too theoretical—if we rely on the synthetic mode, to the neglect of the method of analysis, we dwarf the powers of reasoning, and in making mere matter-of-fact physicians, we are very liable to imbue them with an empirical spirit. But to reason and observe are the same, in men of any quickness and force of thought. No one gifted with an ordinary amount of logical turn of mind, can observe a number of isolated facts without an attempt at classification. Theoretic conceptions of the phenomena of nature, are inseparable from the powers of observation and reasoning in man. The final test, and most exquisite proof of the excellence, of any theory, consist in its capability of explaining all the phenomena observed in any given department of knowledge, and of guiding the mind to the discovery of new facts in the science.. From the very nature of many of the questions with which medical science has to deal, instability necessarily attaches to most of our theories. Life is continually presenting varying aspects;—its essential nature, and constantly diversified phenomena in health and disease, are subject to laws and conditions of being and development, at total variance with the fixed and unchanging laws and conditions of inorganic substances. We are incapable of making a rigid application of any theory we may form of vital action. The vital principle we know nothing of, as far as its ens, or essence, is concerned—whether it inheres primarily in the brain, or floats in the blood, or is fixed in the stomach.—But whilst uncertainty rests upon many of such questions, certainty is stamped upon the more demonstrable portions of the science. Anatomy presents a fixed and most alluring resting place for the most diligent inquiry. Chemistry, materia medica, and operative medicine, or surgery, are each of them of positive and decided character. The facts made known, and the general principles announced in our anatomical inquiries, are of primary importance, and cannot be too diligently studied.

Anatomy is indeed the very ground work of the whole edifice of medical science. No enduring trophies have been reared by the ancients on the field of this department of physical science. They knew nothing of human anatomy, and therefore they have left no monuments of that great intellectual power so conspicuously displayed in other fields of mental effort. The moderns have acquired a great, and thorough insight, into the structure and functions of man's physical constitution. And to this accurate, profound, and comprehensive knowledge of anatomy are we to ascribe in great part, the immense superiority of medicine as it now exists in all civilized countries, to medicine as it existed in Greece and Rome in their proudest and most palmy days of philosophic glory. Surgery cannot move a step without the guiding light of anatomy, but with correct anatomical knowledge the surgeon can take up aneurismal or bleeding arteries, penetrate deep seated parts, operate on a strangulated bowel, or amputate a limb, with unerring precision of hand, without incurring any risk of making his patient a victim to his boldness.

Much time, and patient toil should be devoted by the student to anatomy. Nor should he rest satisfied with a demonstration of the parts by his public teacher. He should dissect for himself, not in a hacking, hurried, hap-hazard manner, as the manner of too many is when they take scalpel in hand, and stand over the dead body, but with minute, pains-taking, accurate attention. Slowly, with gradual, well determined accuracy and precision let the medical student go into, feel and see, every organ, nerve, important vessel, tissue and viscus, and then with familiar recognition will he be enabled to cut upon each part, should his surgical skill hereafter be required to relieve a fellow being by some operation of great moment and delicacy.

The practising physician should be as intimately conversant with the anatomical relations, and uses of the various portions of the body, as the commanding general of an army should be with the geographical bearings of the country in which he expects to meet a wily and powerful foe. If ignorant of the brain, and its investing membranes—and of the circulation of that important organ, how can he correctly interpret the symptoms of disordered action exhibited in cerebral affections? If he does not know where the stomach lies, what organs are contiguous to it, what nerves and bloodvessels are distributed to it, and what its internal, middle, and external coats are, how is the medical practitioner prepared to detect its diseases, and administer for their cure?

Not less minutely and extensively should the medical student be acquainted with materia medica, than he is with anatomy. The natural history of the plants employed, with their chemical and physical, as well as medicinal properties, should be familiar to his mind. Pharmacy, and the theory and art of prescription should be well studied. By the taste, smell, and aspect, of the vegetable medicines the student should be able to recognize the most important articles of that class of remedies. Chemical analysis will direct him in the detection of poisonous substances, which he is called upon to examine. The knowledge of chemistry, in its applications to medicine, demands and should receive much more time and study than are commonly bestowed on that very interesting and useful branch of our science. The recent splendid discoveries of new remedies made by distinguished chemists have conferred a boon of surpassing value on the art of healing. We do not place a very warm reliance upon chemistry as an interpreter of the processes of vital action, nor upon the results of chemical analysis as a true exponent of pathological changes. Extravagant and misleading views on the applicability of chemical laws to vitality, and disease, have so often beguiled medical speculatists of their sober judgments, that our minds are not at all prone to any indulgence in such hypothetical explanations.

The student being well grounded in general and special anatomy, as taught and enforced by demonstrations of the lecture room, and by practical study on the dead body; having been made well acquainted with the articles of the materia medica, their natural history, chemical and physical, as well as remedial properties, and having his mind well stored with a knowledge of medical chemistry, is now prepared to go on with renewed energy, and quickened perceptions in the study of the directly practical parts of the science. The theory and practice of medicine, surgery, and midwifery, are the terminating points of all his previous studies. That the theory and practice of medicine be thoroughly understood, the institutes of medicine, general and special pathology, general and special therapeutics, must be learnt. Physiology is perhaps best understood in connection with general anatomy, and general and special pathology should always be studied in reference to its only sure foundation, morbid anatomy. This very important branch of medicine has been too little cultivated among us, but we trust that a better era is drawing on our profession, and that ere long, every practitioner of medicine among us will be well acquainted with those changes of structure which so often constitute the origin of lesions of function in the organs. Transcendental physiology, or a speculative discussion of molecular movements, and of atomic action and reaction, can be of little avail in furnishing just lights for the formation of an enlightened judgment of disease.

Therapeutical indications may be studied in the direct relation which they bear to materia medica, or they may be comprehended under the principles of general pathology.

Whilst theories of disease, and of the indications of cure, are constantly fluctuating with the progress of the science, the popularity of each new reformer, and the mutability incident to a love for novel doctrines, yet the great leading facts of the science remain untouched by all the revolutions of opinion and changes of fashion in medicine.

Medical men may run an endless circle of disputes on the doctrines of inflammation, whether it consists in increased or diminished action of the vessels, and whether there be *error loci*, spissitude, or attenuation of the blood, giving origin to its phenomena, but with regard to the fact, that pain, heat, redness and tumefaction are the pathognomonic symptoms of inflammation, no diversity of opinion exists. Nor is there any contrariety of view entertained on the most eligible plan of treatment for inflammation.

The history of medical opinions is full of instructive commentary on two great features of the human mind; the love of novelty, and its limited capacity for the discovery of truth. From the time that Hippocrates speculated concerning the pur, phusis, and dunameis, of the human body, down through the many changes of the humoral doctrines of diseases, to Cullen's spasm, vis medicatrix, and reaction, there has been a restless eagerness to explain every thing by one prolific, all comprehending hypothesis. But modern medicine has, we trust, become more wise, considerate and sedate. *A priori* views of nature either in her healthful or morbid states, receive little countenance from the majority of well instructed practitioners of medicine. The student should not waste his time and expend his faculties on such vague generalities, and misleading fancies as those which sparkle on the pages of some physiological writers. Physiology has wantoned too long in the mazy paths of fancy; let us restrain such wanderings, and cultivate this department of medicine with the chastened spirit of a sound philosophy.

In order to attain a correct knowledge of diseases and their appropriate modes of treatment, observation must come to the assistance of mere dogmatic teaching. Books and lectures are essential, for in the pages of a well selected library are deposited the treasures of our science, and the vivid and pointed elocution of the living teacher will impart clearness to the truths of the science he is employed in expounding. But besides text books, and lectures, the student of medicine must be taught practical lessons at the bed side of the sick. Hospitals are therefore indispensable to give certainty to the prelections of the professional chair. The symptoms witnessed in the clinical ward, with the observed effects of certain measures of relief, substantiate the teachings, written or spoken, and impart a soundness and staidness of judgment to the student, which cannot be derived from any other source. Three mutually concurring means are necessary to the perfecting of a sound medical education—books, lectures, and a hospital.

In selecting books for the student who has just entered on his noviciate, respect must be had to the difficulty with which the mind can lay hold on the principles, or abstract positions of a science, without immediate verifications at hand to render them palpable, and of ready comprehension. From neglect or violation of this obvious truth, many a student of medicine wastes fruitless days of effort to grasp the doctrines of medical science, which require the most matured intellect to comprehend. Or perhaps the student has a book of anatomy put in his hand, and having no dissections to guide him, he memorizes many hard terms, and after spending wearisome days and nights at the task, only arrives at confused and erroneous notions of the structure, relations and uses of the various organs described by the author. Anatomy should not be studied, except in a very brief outline, without actual inspection of the parts delineated. Let the student take his scalpel in hand, and with his book of anatomy before him, carefully dissect the subject for himself. Osteology can be profitable pursued at any time—and the sooner the better—wherever the bones of the human body can be obtained. Materia medica should, at an early date of his pupilage, receive the attention of the student. With specimens of the different medicines before him let him become familiarized to their sight, taste, and smell, and strive to arrive at just conceptions of their virtues. A dispensatory should be at hand, whilst he is studying a good work on materia medica. Nor should he consider the practical parts of his medical tuition complete, unless he superadds to his knowledge of the properties of remedial bodies, an acquaintance with the best methods of compounding, and of exhibiting them.

There are certain advantages to be secured by reading in the shop of a practitioner who keeps and puts up his own medicines. Where the student does not possess such advantages he should go for a short time into an apothecary's shop, that he may become practically conversant with those agents which he must hereafter prescribe. Out of our large cities, physicians keep their own drugs, and act the part of compounders of their own prescriptions. An active, intelligent student is of great service in taking off the burden of this duty from the hands of his preceptor. In consideration of this kind of service, and from a consciousness (we charitably infer) of utter neglect on the part of the preceptor in properly conducting the studies of the pupil, few of our physicians are in the habit of charging office fees. If they demand remuneration for the slender amount of direct assistance given, in conducting the mind of their students in the rugged road of medical science, their conscientiousness cannot be particularly alert. The almost total omission on the part of private medical preceptors to examine, at stated and often recurring seasons, their students, inflicts great evils on the cause of a correct medical education.

Deriving low and inadequate views of the excellence, variety, and extent of medical science from the estimate put upon it by his preceptor, the student never, perhaps, lifts an aspiring eye to those heights of honorable distinction which tempt others who are better instructed, to the most assiduous consecration of their energies. With groveling conceptions of what medicine is, and with feelings of cupidity to seize upon the golden lure which fancy holds out to his vision, he foregoes the earnest concentration of his best faculties to the work of fitting himself to be an enlightened physician, and sinks down into the calm apathy of becoming a mere routine, pill driving drudge.

Our earnest desire is to stir up the minds of medical practitioners to a due sense of obligation they are under, to conduct the studies of their pupils in a far different manner than at present. But few among us feel our responsibility on this head as we should feel it. And yet, a solemn and responsible trust is committed to us. The honour of the profession, our own reputation, the future professional standing of the young men who confide the guidance of their medical tuition to our judgment, all are jeoparded, perhaps marred and blighted by our reckless, listless, apathetic conduct in the discharge of this great duty.

If we are entirely averse to the punctual fulfilment of this important function, let us have the candor to avow it, and decline the task and honor of receiving students under our charge. The candid, high minded practitioner is placed at the portals of his profession, and he may do much to keep out from its consecrated precincts many an unworthy member. Let him refuse to receive any student who is ignorant of the rudiments of a good English education;—who cannot give proofs of his thorough acquaintance with the grammatical structure of our language—of a sound geographical knowledge—of the elements of arithmetic, and of a pretty accurate historical knowledge of ancient and modern nations, and especially of his own country. It may be objected to these suggestions, that the physician to whom application is made by a young gentleman who wishes to study medicine, has no right to exercise towards the applicant any such scrutiny. But surely any medical man is not obliged to receive every one who may choose to think himself qualified to enter upon the study of medicine. Should, for example, a young man come to him, and solicit the favor of being made the guardian of the public health, who can neither read nor write, and when the valid objection is urged, that he is not prepared, he should respond in the language of a medical practitioner of some *dark* notoriety among us, that reading was of no avail, and that practice and not books makes a physician, could it be said with any plausible grounds of reason, that the poor young medical aspirant was treated with unmerited severity?

Every physician has an entire right to exercise this prerogative, to lay down the conditions upon which he will take students under the supervision of his professional instruction. And the plain and practical question for him to solve, is this—whether in the present crowded state of the profession, with hundreds of young physicians with little or no employment, and with the tempting facilities held out by the multiplication of medical schools, and of their too easy terms of graduation, it is not the imperative duty of every enlightened and conscientious practitioner of medicine, to do all he can to raise the standard of qualifications in those who aspire to share the honors, and responsibilities of the profession? We recommend this matter to the considerate notice of our professional brethren, and with earnestness we importune them not to disregard the appeal. As they value the standing and usefulness of the profession which they pursue as a means of subsistence, and of benevolent activity, we implore them to make some endeavors to redeem the practice of medicine from the degradation which has so generally befallen it, in consequence of the ignorance and false pretensions of so many who are engaged in it.

If a great responsibility rests on private practitioners of medicine in this matter, a far more weighty and solemn responsibility has been assumed by our medical schools. We address them as enlightened expounders and liberal advocates of medical instruction. Our profession stands deeply indebted to medical schools for much of its intellectual glory and beneficent activity. Nevertheless, we have a few things to say in the way of respectful admonition to them, which, we trust, may be kindly received, and which, perhaps, may direct the reflections of their respective Faculties into a channel, which may terminate in some melioration of their present standard of medical education.

There are several distinct topics of importance which we wish to discuss in this connection. The first relates to the prerequisites, or conditions, required by the most respectable medical schools, upon the fulfilment of which a student can place himself as a candidate before the faculty for a degree of Doctor of Medicine. "The candidate must," says the University of Pennsylvania, "have attained the age of twenty-one years, have applied himself to the study of medicine for three years, and have been, during that time, the private pupil, for two years at least, of a respectable practitioner of medicine. He must have attended two complete courses of the following lectures, in the Institution — Anatomy, Practice of Physic and Clinical Medicine, Materia Medica and Pharmacy, Chemistry, Surgery, Obstetrics and Diseases of Women and Children, and Institutes of Medicine. He must also have attended one course of Clinical Instruction in the Philadelphia Hospital, or the Pennsylvania Hospital, or some other institution approved of by the Faculty of Medicine. Medical students who have attended one complete course in a respectable medical school, where the attendance on two complete courses is necessary to a degree, where the same branches are taught as in the University of Pennsylvania, and which is placed on the *ad eundum* of that school, are permitted to become candidates by attendance there for one full course. General bad spelling in a Thesis, or general inattention to the rules of grammar, will preclude a candidate from examination for a degree. Graduates of medical schools on the ad Eundum list, by attending one complete course in this Institution, are put upon the same footing with students who have attended two complete courses here."

This distinguished and popular school of medicine, the oldest in the United States, has erected as high a standard of necessary qualifications in candidates for a degree, as any other medical institution in the Union. Some of the other very respectable schools of medical instruction in our country have as many chairs as the Medical Department of the University of Pennsylvania has, but they do not insist on hospital attendance, which that school makes an essential condition. There seems a graduated scale of regulations, as regards the period and course of studies, laid down by our American Medical Schools.

The highest period of study demanded of a candidate is three years, but several medical institutions have reduced the required period of professional education to two years. We are not aware that a single school of medicine in the United States demands of the candidate for a degree any greater evidence of his having attended to anatomy than can be furnished by his attendance on two courses of lectures on that fundamental branch of medical science, and his capability of returning correct answers to the questions propounded him by the professor of anatomy, at his examination for the doctorate.

In one of our medical schools a young man may graduate by attending only one full course of lectures.

The session in all of our schools of medicine is restricted to four months. An apparent exception to this remark obtains in the University of Pennsylvania. The regulation on the subject of a prolongation of the session is thus stated, in the Catalogue of Medical Graduates, with an Historical Sketch of the Origin, Progress, and present state of the medical department, published in 1839: "Previously to the yeat 1837, the courses of lectures occupied only four months; but in consequence of the number of lectures which the shortness of the session rendered it necessary to crowd into each day, the student was subjected to more fatigue than was compatible either with his comfort or the most profitable exercise of his faculties. By the addition of two weeks or a month to the session, the Faculty have endeavoured in some measure to obviate this disadvantage; and have at the same time gained an opportunity to give some expansion to those courses which were most restricted."

In but few of our medical institutions are there more than six chairs: in several, these six chairs are filled by only three professors. Anatomy and surgery in several of them are taught by one gentleman.

In this respect some of our medical schools have not advanced beyond the first arrangements made on this western continent, to teach medicine by a distinct organization of a medical faculty. A system of medical instruction was admitted into the plan of the University of Pennsylvania, then the College of Philadelphia, in 1765, when Dr. John Morgan was appointed to the Professorship of the Theory and Practice of Physic, and Dr. Wm. Shippen to that of Anatomy and Surgery. Dr. Morgan was, however, to teach not only the theory and practice of medicine, but materia medica, and "all the remaining medical sciences," not comprehended in Dr. Shippen's professorship, which embraced instruction not only in Anatomy, and Surgery, but also in Midwifery.

In 1767, the adoption of a set of rules, in relation to the medical honors maturing by the College, was the next step in perfecting the scheme. These rules determined that there should be two degrees—one of Bachelor of Medicine, the other of Doctor of Medicine. In relation to the lowest degree, that of Bachelor of Medicine, rules were adopted, which required the students to satisfy the trustees and professors of their knowledge in the Latin language, and such branches of mathematics, natural and experimental philosophy, as should be judged requisite to a medical education. Each student was required to attend one course in Anatomy, Materia Medica, Chemistry, Theory and Practice of Physic, and Clinical lectures, and the practice of the Pennsylvania Hospital for one year. It was "further required, that each student, previous to the Bachelor's degree, shall have served a sufficient apprenticeship to some reputable practitioner in physic, and be able to make it appear that he has a general knowledge in Pharmacy."

"The prerequisites for the degree of Doctor of Medicine, were determined as follows: It is required for this degree, that at least three years shall have intervened, from the time of taking the Bachelor's degree, and that the candidate be full twenty-four years of age; who shall also write and defend a thesis publicly in College."

After various vicissitudes of fortune, having been suspended during the War of the Revolution, and a new school organized under a separate charter, upon a union of the two schools in 1791, a better organization of the Faculty took place early in 1792. Six professorships were created, and the degree of Bachelor of Medicine was now wholly discontinued, and that of Doctor of Medicine was the only honor henceforward conferred by the medical school.

"The gradual expansion of the school upon the surer basis of the demands of medical science," did not reach its present more complete organization till 1810. "From 1810 to 1835 the medical school may be considered as stationary, in relation to its organization." The six Professorships then were, Anatomy, Practice, Institutes and Clinical Medicine, Materia Medica, Chemistry, Surgery, and Midwifery. In 1835, the trustees decided that the Institutes of Medicine should form the ground of a distinct chair, so that, as at present organized, there are seven distinct professorships in the medical department of the University of Pennsylvania.

We have adverted in the above brief sketch, to the history of this celebrated school of medicine, for the purpose, of encouraging the friends of medical education to a more vigorous and united action on the field of reform. In furtherance of this great end, we shall now present succinctly what the profession in other countries has been able, through their respective governments, to accomplish.

The medical profession of a country constitute the best guardians of its own interests, and most judicious promoters of the schemes calculated to urge it onward in the road of usefulness and renown. Yet after schemes are devised, and means brought into activity, for the promotion of medical science, medical men address their petitions to the legislature of the land for the authoritative sanction of the law, to protect and aid their enterprize. Schools of medicine are chartered, and medical societies incorporated, not to favor by personal benefactions any two or three physicians, but to give encouragement to the faculty generally, for the cultivation and improvement of the art of healing. England, France, Germany, and other civilized countries have shown by a wise legislation, the deep interest which they have felt in the progress of medical science. The respective governments of these countries, guided by an enlightened estimate of the benefits conferred on society by a well instructed and skillful body of medical practitioners, have extended their patronage, and active co-operation, in building extensive and durable institutions for medical education.

We shall enumerate only a few of the facts, pertaining to the subject of medical education abroad.

We begin with London. The occupation of teaching, and the power of examining and conferring degrees, are exercised by distinct institutions in the British Metropolis. The principal hospitals have separate schools for instruction in medicine and surgery, and the London University has a well organized medical Faculty.

There are three distinct bodies in London, which exercise the power by law to confer degrees. One is the company of Apothecaries, another is the Royal College of Surgeons, and the third, the Royal College of Physicians. The Society of Apothecaries requires every candidate for a certificate to practice, as a general practitioner, to produce testimonials of having devoted at least two years to an attendance on lectures and hospital practice. The curriculum of study comprises two courses on Chemistry, Materia Medica and Therapeutics, Anatomy and Physiology with Anatomical Demonstrations, Principles and Practice of Medicine, and Midwifery and Diseases of Women and Children; and one course on Botany, and one on Forensic Medicine. The candidate must have attended one of the large hospitals for at least twelve months, and must be capable of making accurate translations of Celsus de Medicina, or Greogory's Conspectus Medicinæ Theoreticæ, Pharmacopæia Londinensis, and physician's prescriptions.

The Royal College of Surgeons requires candidates to bring proof of being 22 years of age; of having been engaged five years in the acquirement of professional knowledge; of having studied Anatomy and Physiology by attendance on lectures and demontrations, and by dissections, during two anatomical seasons, extending from October to April inclusive; of having attended at least two courses on Surgery; of having attended lectures on the practice of physic, on chemistry, and on midwifery, during six months, respectively; on botany and materia medica, during three months, and of having attended during twelve months the surgical practice of a large hospital.

The Royal College of Physicians in London requires five years study, and two full courses of lectures of at least six months duration on Anatomy, Chemistry, Materia Medica, and Practice of Medicine, and one course of lectures on Botany, Midwifery, Forensic Medicine, and Surgery, with three years at least of attendance on the medical practice of some general hospital, containing on an average, one hundred in-patients, and having a regular establishment of physicians and surgeons. This College requires that the student attend two courses of Dissections and Demonstrations, of at least six months duration.

The Faculty of Medicine of the University of Paris, is composed of a Dean, and the following professorships:—Anatomy, Physiology, Chemistry, Medical Physics, Surgical Pathology, Medical Pathology, General Pathology and Therapeutics, Botany, Clinical Medicine, Clinical Surgery, Clinical Midwifery,—in all eleven. Candidates for the Diploma of Doctor in Medicine or Surgery, are required to have studied four years, independently of being first bachelors of letters, during which period they have to take out an inscription, or sort of ticket, every three months for attendance on the lectures and hospitals. Members of foreign colleges and universities present themselves for examination after two years' study in Paris. The scholar year begins on the first of November and terminates on the thirty-first of August.

The following is the prescribed order of study:

1st Half-year.—Anatomy, Physiology, Chemistry.
2d. Medcial Physics, Hygiene, Medical Natural History.
3d. Anatomy, Physiology, Operative Surgery.

4th. Hygiene, Medical Pathology, Pharmacy.
5th. Operative Surgery, Medical and Surgical Pathology.
6th. Clinical Medicine, Clinical Surgery, Materia Medica.
7th. Clinical Medicine, Clinical Surgery, Medical Pathology.
8th. Medical Jurisprudence, Therapeutics, Obstetricity.

The examinations for the diploma are five in number. The first takes place after the fourth inscription is taken out; the second after the twelfth inscription: the three remaining examinations take place at the termination of the course of study.

The subjects upon which the candidates are examined on the first examination are, Natural History, Physics, Medical Chemistry, Pharmacology; on the second, Anatomy, and Physiology; on the third, General Pathology, Medical and Surgical Pathology; on the fourth, Medical Jurisprudence, Hygiene, Materia Medica, and Therapeutics; and on the fifth, Clinical Medicine and Surgery, Operative Surgery, and Obstetricity.

Each examination lasts two hours; during which, four candidates are questioned by three examiners.

For the Anatomical examination the candidate is required to make a preparation from a part of the body, which is indicated to him on the same morning, and to answer questions proposed to him relative to the preparation. Candidates have also to write and defend a thesis on some subject relative to medicine or surgery. The clinical examinations take place in the clinical hospital at the bedside of patients.

In the medical department of the celebrated University of Berlin, the candidate for the doctorate is required to attend the lectures four years, and undergo four examinations. The first is for promotion; the second, termed the *tentamen*, is made by the dean, and takes place before the period of study is terminated; the third, or *rigorosum*, is made before the professors of the faculty, when each professor examines on his particular branch of education. Three or four students are examined at a time, and the examination generally lasts upwards of three hours. Candidates have also to write and defend a thesis in Latin.

In the last examination the candidate takes from a vase the name of one of the bones, of which he is required to give a description without hesitation. In like manner the name of a viscus is drawn by lot, and described: a part of the body, to be dissected and demonstrated, is also indicated in the same manner. An anatomical description of the contents of the cranium, thorax, or abdomen, with the relative position of the viscera, is likewise required.

In the surgical examination the candidate has to perform operations publicly on the dead body, and describe the different steps of the operation; also, to give a demonstration on the skeleton, of the method of treating fractures and luxations.

Two patients in the hospital are given in charge of the candidate for a fortnight, whose treatment he conducts, and he reads the notes of the history of the case at the examination.

At Vienna, the candidate for a degree of doctor of medicine, must study five years, and attend lectures during ten months of each year.

In the Edinburgh school, the candidate is required to study four years, and attend seven branches.

Let us, with candor contrast the regulations of the medical schools of the United States, with those adduced. First, as respects the primary education of the candidate; second, as regards the entire period of study; third, the number of professorships; fourth, the time allotted for the delivery of the lectures, and the last place, the mode of conducting examinations.

It is apparent that American Medical Institutions, from their entire neglect of making classical learning a prerequisite of graduation, and from their pretermission of any reference to the subject of academic attainments in the candidates for a diploma, surrender the whole question of preparatory education as untenable ground. Perhaps they find that it is an impracticable, though in itself a very desirable, matter for regulation by their respective faculties. The University of Pennsylvania requires good spelling, and attention to the rules of grammar, in the thesis submitted by the candidate,—and we presume all the other institutions do the same, though they have not formally announced such a regulation. Exactitude, we are free to concede, it is scarcely possible to attain on this point, organized as our medical schools are; but private preceptors have it greatly within the reach and control of their legitimate sphere of action, to prevent the introduction of young men into the ranks of the profession, whose primary education is such as to unfit them to prepare a thesis without violations of correct spelling, and of the rules of grammar. An education so defective and superficial as would not qualify the student to write his own language with grammatical purity can only be detected by a private preceptor, for a thesis may be *imprimatured* by a friendly hand, and therefore affords no indubitable evidence of the scholarship of the candidate. But in the familiar intercourse which obtains between a private preceptor and his pupil, ready opportunity is given to ascertain the exact degree of intellectual culture possessed by the student. Let the physician be faithful to his trust, and not compromise the honor of the profession, and his own reputation, by permitting a pupil to remain in his office, or shop, who is inadequately fitted for prosecuting the study of medical science.

On the subject of preliminary education, there has been a retrograde, instead of an advancing movement, among our medical schools. For in 1767, as will be seen by referring to the regulations of the first Philadelphia School of Medicine, a student was not permitted to take even a Bachelor's degree in medicine, until he satisfied the "trustees and professors" of his "knowledge in the Latin language, and such branches of Mathematics, Natural and Experimental Philosophy, as shall be judged requisite to a medical education." Perhaps, in this brilliant day of the march of mind, all such inquisition into a student's general attainments, might traverse the eccentric path of genius, or possibly, interfere with our ideas of equality! Difficult as the whole case may be in its final adjustment, and embarrassed as we feel assured it is, with perplexities of no ordinary character, still the cause of a sound and thorough scheme of medical education demands some effective reform on the subject.

The second topic, to which our attention is called, is the period to be devoted to a strictly professional education. Our highest standard reaches three years, whilst the highest in other civilized countries is five years. Our lowest term is two years, whilst the lowest term among other enlightened nations is four years. And why should such a discrepancy exist? Why is it necessary for a medical student in Paris to study four years, amidst all the advantages presented by the hospitals, repeated examinations, and protracted courses of lectures, in that great metropolis, whilst some of our medical schools deem it necessary to allow only two years as a period of professional study sufficient to qualify a young man for the practice of his profession? If this is intended for a compliment to the acuteness and industry of our students, or to the *peritus loquendi et dicendi*, the ability of lecturing and teaching of the professors, we fear that it is offered without sufficient grounds of just application. In all seriousness, we would expostulate against such compliments when made in manifest infraction of the plainest suggestions of reason. Complaints are every day uttered, against the incompetence of the medical education of too many medical practitioners. Instead of two years, our decided conviction is, that four years, should be invariably prescribed as the shortest period of medical study, which may entitle a student to become a candidate for a diploma. Look for a moment, with a sober eye of inquiry, at the amount of attainments, and degree of practical skill, essential to the exercise of the duties and responsibilities of a medical practitioner. What are his duties and responsibilities? To alleviate human suffering, restore health to the sick, prevent disease, and to promote the well being, in all available ways, of the frail and complicated mechanism of the human body, whilst the mysterious agency of the restless mind in its action on the body, and of the body on it, is interpreted, regulated and restrained,—these, in few words, comprise the professional duties imposed on the physician. To know how to act, and when to act, must precede the ability of interference on the part of the medical practitioner. The diseases which assail the human body are exceedingly numerous. The single organ of sight is subject to more than one hundred distinct morbid states. The brain is liable to nearly, if not quite as many, inclusive of maniacal forms of disease. The stomach, liver, kidneys, and other organs have each their peculiar forms of deranged action. Then there are diseases peculiar to the female sex; and diseases incidental to childhood, and to old age. The accidents constantly occurring in life, subject man to the necessity of many severe and difficult surgical operations.

From the helpless period of cradle life, up to the full maturity of his bodily powers, and down to his declining days, man is the victim of a countless host of severe and dangerous diseases. Nor are the causes which incessantly act in the production of disease less numerous than the disorders to which they give rise. They are around our daily path—they are within us, and without us; often of such subtle agency as to elude the eye of observation till their effects burst forth in overwhelming power, and sweep away all the defences of life.

Art has marshaled its proud array of counteractive, and remedial means to mitigate pain, overcome disease, and give back to struggling nature the force and animation of health. To effect these ends, all the regions of the earth are rifled of their vegetable, animal, and mineral products;—chemistry forms new combinations, or educes elementary substances from compounds, to aid in this great work, and the human hand, disciplined by constant use into dexterity and nicety of operation, puts forth its utmost skill, when other modes of relief have failed of their accomplishment.

Science has reduced all the maladies, and their correspondent means of removal, into methodical arrangement. To be a scientific practitioner of the healing art, days, months, and we will add, years should be devoted to the study of medicine. Time, industry and good sense are demanded. Genius can do but little to aid a young man in becoming a discriminating, safe practitioner of medicine. To become scientific and skillful in medicine, great pains must be taken, great labor must be undergone, and a strong and ardent desire for excellence must be felt. *Vires acquisit eundo*, the chariot wheel is warmed by its own motion, is a familiar form of expression to denote a very important principle in the mental constitution of man. No individual, however gifted with the richest endowments of mind, can summon at once all his powers of thought to an investigation to which his faculties have not been habituated. Continuous attention, and protracted inquiry are the only conditions upon which truth is made to reveal the beauties of her divine form.

In proportion to the complexity and extent of a science, is the requisition on the mind for protracted, patient, and sedulous labor. Medical science is a wide and fertile field. Its vast compass of minute, abstruse, and extensive research has never been thoroughly mastered. What apology is there—can there be—for lowering its claims on the attention, and of disparaging its just demands on the faculties, of the best educated, and most intellectual young men of the land? Assuredly, no argument can be brought from the facility by which the mind reaches truth in medical science, that authorizes us to abbreviate the period of study devoted to the acquisition of such a knowledge of medicine, as will enable a man to practice with success this responsible profession. How solemn are our duties, how vast and momentous our responsibilities, as guardians of the health, as arbiters of the mortal destiny, of our fellow beings! How godlike the mission to rescue a parent, wife, husband, or child, from the borders of the grave, and restore such a beloved object to the embrace of friends, and "to the warm precincts of cheerful day"! But to be a bungler;—a weak, vacillating, erring, ignorant, presumptuous intermeddler of nature at the bed side;—without correct conceptions of the state of the sick, and with no sound jugdment of what is to be done to save the unhappy patient, who has thrown himself on our skill, and pleads in all the anguish of his helpless prostration for our kind offices to save him from going down to a premature grave,—how awful the guilt thus contracted, and how terrible the retribution awaiting him, who thus assumes a task which he has never, by adequate preparation, fitted himself to exercise! And are we to hold out extraordinary inducements;—to offer seductive considerations to the inexperienced minds of the young, to embark heedlessly, and without a sound and wise outfit on this perilous navigation? What have we to offer in extenuation of this obvious disregard of the dictates of reason and humanity, in inviting young men to rush forward, and take their stations at the bed sides of their suffering fellow citizens as their medical advisers, without a thorough preparation for the duty? Can we in truth assert that there is a lack of competitors for medical practice, that the system of professional education is to be let down so low as to offer a proper encouragement to those who wish to embark in this calling, but who are deterred by the toil and cost of a lengthened and laborious period of study? No, for it admits of no contradiction, *that the supply is excessive.* The standard of education instead of being brought down to afford facilities for a more rapid multiplication of medical practitioners, should be raised to repress the too common error which prevails among us, that to become a physician, all that it is to be done, is to slur over the pages of a few text books, know that mercury will salivate, tartar emetic vomit, quinine cure an intermittent—then hurry to some accommodating school of medicine—attend two courses of lectures—pass through a hurried examination—and forthwith burst out, in all the glory of a latin diploma, a crude, superficial, and very dangerous pretender in medicine. But we pass on to another interesting point in this discussion, namely, the number of professorships in our medical schools. On this part of our subject we have but a few thoughts to offer. The prominence given to general chemistry in most of our medical schools, *to the exclusion of more important matters*, is a defect that should be remedied. Not that we entertain any disparaging views of that very interesting and useful branch of physical science, but in the curriculum of study in our schools of medicine, whilst chemistry has a conspicuous place, other branches of a more direct bearing on the art of curing disease, are either in part, or altogether, neglected. Hygiene, and Medical Jurisprudence, as distinct branches, are more deserving of a separate course of lectures than chemistry; for what has light, heat, electricity, &c., to do with the knowledge of disease, or the best preventive measures to ward it off? Pathological Anatomy is a most copious and very useful branch of medical science. It certainly should receive more attention at the hands of our teachers than general chemistry.

Clinical Medicine can only be taught in a hospital. The student may be much improved in his knowledge of diseases and their treatment, by seeing the patients of his private preceptor; but few opportunities for such observation are presented. The manner of attendance on hospital practice admits of much improvement.

The students should not crowd round the beds of the sick, but a classification of them should be made, and the clinical professor should meet a class of four or five, and instruct them in a thorough manner by the examination of but several cases of disease at a time. Nor should students be allowed to attend clinical practice during their first course of lectures, as their minds are not prepared to profit by such practical exhibitions.

It would be entirely supererogatory to insist on an augmentation of the professorships in our medical schools, unless the period allotted to the delivery of the courses of lectures, was enlarged. What a contrast is exhibited between the medical institutions of London, Paris, and Berlin, and these of our own country, on this point!

Our medical schools hold sessions of four months each year,—making eight months attendance on lectures obligatory on a candidate for a degree. In London, two courses of seven months each are demanded, making fourteen months of attendance on lectures necessary for graduation. In Paris, the session continues ten months, and four years are required, which makes forty months attendance on lectures, a necessary prerequisite for a diploma. In Berlin, the medical year extends to nine months, and four years of study are demanded; thirty six months consequently are spent in attending lectures.

The University of Pennsylvania has made a sort of hesitating, reluctant movement towards reform in this matter. But the addition of two weeks, or a month to the session should not be entitled to the appellation of a decided step in the bringing about any great reform in this enormous defect. Why should this deplorable state of things run on? Cannot our medical schools appoint delegates, who shall meet and adjust all those regulations, which they may deem expedient in order to elevate the standard of medical education? We fear that an exaggerated apprehension exists on this question among the trustees and professors of our medical schools. They possibly apprehend that should the standard of medical education be raised by any one of them, that their popularity would decline, and other schools reap the benefit of such higher demands on the time and industry of medical students. There may be just grounds for such an apprehension, and therefore we conceive, that it would be best to have this whole business adjusted and settled by a convention of delegates from the respective faculties of the most distinguished schools. Should four, or five, of our medical institutions make such a simultaneous movement, the others would quickly adopt the regulations of their co-temporaries, or fall still further behind them in their inglorious attachment to the defects of the present system.

At least six months, from the 1st of October to the 1st of April, should be employed by our schools of medicine in teaching the branches now taught in them, and in teaching one or two more which receive, at present, little direct illustration and enforcement at their hands.

The last topic to be noticed, respects the mode of examination, pursued by most of our institutions for medical instruction, to ascertain the qualifications of candidates for a degree. The French plan, or that pursued at Berlin, is one best calculated to test the amount and accuracy of attainments made by the candidates, in sound practical knowledge of the science. But we have already expatiated with sufficient amplitude on this much trodden field. Our hope is, that the subject may receive that degree of consideration which it so well deserves. The public good is deeply involved in the practical bearings and issues of this question.

In the scientific and literary attainments of the humblest citizen, society should feel a lively intesest. No one lives for, or to himself, but all the mental opulence which, by his own industry he has acquired, goes to augment those treasures of thought, by which society is enriched with its most imperishable wealth. The learning, high minded integrity, and courteous bearing, of medical men, are felt in the most familiar walks of life. In city and country, the pysician moves in a wide circle, and daily meets in social proximity every class of men. His virtues and endowments shine with a mild and cheering light in the humble dwellings of the poor, and spread the lustre of his profession's honor in the proud mansions of the rich. Philanthropy claims him as her bravest, brightest champion, in the hour of sickness, sorrow, and gloom, and prompted by just conceptions of his high vocation, her call is never made in vain. Virtue attends his footsteps, and lights up the onward career of his active life.

Education in him ever finds a kind and generous friend, willing to co-operate in every plan that proposes the diffusion of useful knowledge among his fellow men.

His country's best and dearest interests lie near his heart, and he stands erect and ready to obey her demands upon his time and talents—And religion breathes through his lips her divine words of consolation amid the bitter dispensations of providence, which he is often called to witness. Such is the enlightened and virtuous physician, with a mind well fraught with general information, and richly stored with professional knowledge, and with a heart pregnant with a glowing zeal for the happiness of his fellow men. Such a man must be honored, respected, loved, as long as there dwells in the bosom of man any sense of goodness, or any appreciation of intellectual excellence.

Sickness is a great leveller of human distinctions. In the hour of pain and oppression, when sorely beset by disease, the strongest intellect is not proof against the illusions of false medical pretensions. Amid the alarm and agitation of the sick man's couch, we should not expect reason to exert her discriminating powers in a sufficient degree to repel the insidious approaches of a vile and ruinous quackery, which stands prepared to urge its ignorant measures of relief.

Men do not pause to weigh, reason, and deduce conclusions, when pressed down by the pains and infirmities of disease. Fashion, popularity, the recommendation of friends, or perhaps a newspaper puff, induces a choice which may determine the fate of themselves, or of their families.

When introduced into the family circle, what a responsible position does the physician occupy! To his bosom is often revealed secrets, which if divulged would blast the reputation of individuals, and break up forever the peace of families. He is the constant witness of weaknesses, and frailties of temper in his patients, which teach him to exercise kindness in his intercourse with the sick, and inculcate an incessant watchfulness to keep his lips from improper disclosures of what he is made familiar with as their confidential adviser.

Society can be guarded by no adequate means of protection, from the inroads of false medical pretension, but through the general and concurrent action of the medical profession. Legislative pains and penalties in themselves are not adequate to prevent such abuses. Private physicians and medical schools should co-operate in this good work. It is in vain that we complain that talent goes unrewarded, and that other considerations than those of professional knowledge and worth, are the most certain means in obtaining practice. It is in vain that we feel mortified, and that we do not regard our profession with cheerful assurances of its respectability, when some daring empiric sweeps by in dashing style, or when our ears are assailed by reports of his rapid rise into popular favor. In a great degree the fault is our own. The profession as a body have connived too long at the easy introduction of unprepared men into our ranks. Let us strive, one and all, to resist this crying evil, and with united effort, roll back the dark wave which threatens our profession with such disastrous results.

[No. 4.]

FLORULA LANCASTRIENSIS:

Or a Catalogue, comprising nearly all the flowering and filicoid plants, growing naturally within the limits of Fairfield County, with notes of such as are Medicinal.

To the Members of the Medical Convention of Ohio.

Gentlemen:—

Of the sciences collateral to medicine, I know of none more important than that of Botany; and, although it may appear singular, yet I believe I am borne out by the fact, that the great body of the profession who should feel the greatest interest in its cultivation, are the most careless—if not the most indifferent about it.

Of its importance it is hardly necessary for me to speak, when it is well known that more than three-fourths of the remedial agents to which we are obliged to have recourse, are derived from the vegetable kingdom alone.

Within the narrow limits of my county, I have found upwards of one hundred and ninety species of plants, that are said to possess medicinal properties, and of these perhaps not more than one half, the medicinal histories of which are reduced to any degree of certainty: the other, still luxuriating in a most *glorious* state of confusion and obscurity. Many of these, frequently far more valuable than the substitutes, we from habit are in the practice of obtaining from foreign countries—we permit to waste their value, if not their "sweetness in the desert air."

With a little care and attention, every physician could become tolerably well acquainted with the local Botany within the sphere of his daily avocations, and an enumeration of the species of plants from all quarters of the State, would be of great value to Systematic Botanists in affixing the precise limits and localities to our more valuable ones. The example, (humble as it is,) which I have set, by furnishing you with a list of my plants it is hoped will be followed by many, and will lead to favorable results.

Plants should be studied with a view to their natural relationship with each other; and I have accordingly arranged mine in the order indicated in the "Flora of North America" by Professors Torrey and Gray, as far as published; for what follows, I have adopted the arrangement of Professor Lindley and the Catalogue of North American genera by Dr. Torrey, appended to the "Introduction to the natural system of Botany" of the former author.

Although the artificial system of Linnæus may, at the time in which he lived, have been necessary to give an impulse to the successful study of systematic Botany, yet, it may well be questioned at the present day, whether its advantages are not inadequate to the rapidly onward progress of the science. There are many points in the study of this fascinating science, in which the enlightened practitioner of medicine must feel an abiding interest, particularly those points having reference to the anatomy and physiology of plants, and a faithful inquiry into their sensible and medicinal properties. The natural system is eminently fitted for imparting a knowledge of these highly interesting subjects, from the fact that they are embraced in it, a characteristic totally wanting in the artificial system.

‖ Those plants in the foregoing catalogue, with this mark attached to them I have not yet seen growing, but were collected in Fairfield by Wm. S. Sullivant, Esq., a most devoted, industrious and intelligent Botanist of this place, and to whose urbanity and kindness, I am greatly indebted for the determination of many of my plants.

¶ Plants to which this mark is attached were collected exclusively by Dr. A. Hor of Baltimore, Ohio, an intelligent and industrious devotee to Botany. I may also take this opportunity to state, that I am much indebted to him for valuable assistance, particularly in arranging and determining the extensive orders, Gramineæ and Cyperaceæ.

CLASS I. VASCULARES,—(*flowering plants.*)

Sub-Class i.—*Dicotyledonous plants.*

Tribe I. Angiospermæ.
(Seeds covered.)

A. Polypetalous plants.

I. *Ranunculaceæ.* Juss.
1. Clematis, Linn.
    Virginiana. Linn. 1.
    viorna. Linn. 2.
2. Anemone, Linn.
    nemorosa. Linn.
    Virginiana. Linn.
    Pennsylvanica. Linn.
3. Hepatica, Dill.
    triloba. Chaix. 3.
4. Ranunculus, Linn.
    aquatilis. Linn.
    Flammula. Linn. 4.

R. pusillus. Poir. ¶
abortivus. Linn.
Purshii. Rich.
repens. Linn.
Pennsylvanicus. Linn.
recurvatus. Poir.
5. Caltha, Linn.
palustris. Linn.
6. Isopyrum, Linn.
biternatum. Tor. & Gr.
7. Aquilegia, Linn.
Canadensis. Linn.
8. Delphinium, Linn.
tricorne. Michx.
azureum. Michx.
9. Actæa, Linn.
alba. Big. 5.
10. Cimicifuga, Linn.
racemosa. Ell. 6.
11. Thalictrum, Linn.
dioicum. Linn.
Cornuti. Linn.
anemonoides. Michx.
12. Hydrastis, Linn.
Canadensis. Linn. 7.
13. Trollius, Linn.
laxus. Salisb.

II. *Magnoliaceæ*. Juss.
14. Magnolia, Linn.
acuminata. Linn. 8.
15. Liriodendron, Linn.
Tulipifera. Linn. 9.

III. *Anonaceæ*. Juss.
16. Uvaria, Linn.
triloba. Tor. & Gr.

IV. *Menispermaceæ*. Juss.
17. Menispermum, Linn.
Canadensis. Linn. 10.

V. *Berberidaceæ*. Vent.
18. Leontice, Linn.
thalictroides. Linn. 11.
19. Jeffersonia, Bart.
diphylla. Pers. Syn. 12.
20. Podophyllum, Linn.
peltatum. Linn. 13.
VI. *Cabombaceæ*. Rich.
21. Brasenia, Schreb.
peltata. Pursh. 14.

VII. *Nymphaeaceæ*. Salis. in part.
22. Nuphar, Smith.
advena. Ait. 15.

VIII. *Papaveraceæ*. Juss.
23. Sanguinaria, Linn.
Canadensis. Linn. 16.
24. Chelidonium, Linn.
majus. Linn. 17.

IX. *Fumariaceæ*. D. C.
25. Dielytra, Borkh.
Cucullaria. D. C. 18.
Canadensis. D. C. 19.
26. Corydalis, D. C.
glauca. Pursh.

X. *Cruciferæ*. Juss. 20.
27. Chieranthus, R. Br.
hesperidoides. Tor. & Gr.
27. Nasturtium, R. Br.
palustre. D. C.
29. Barbarea, R. Br.
vulgaris. R. Br.
30. Turritis, Dill.
glabra. Linn.
31. Arabis, Linn.
hirsuta. Scop.
laevigata. D. C.
Canadensis. Linn.
32. Cardamine, Linn.
rotundifolia. Michx.
hirsuta. Linn.
Var. Virginica. Tor. & Gr.
33. Dentaria, Linn.
laciniata. Muhl.
diphylla. Michx.
34. Sisymbrium, Allioni.
officinale. Scop.
35. Sinapis, Linn.
nigra. Linn. 21.
36. Camelina, Crantz.
sativa. Crantz.
37. Lepidium, R. Br.
Virginicum. Linn.
38. Capsella, Vent.
Bursa-pastoris. Moench.

XI. *Polygalaceæ*. Juss.
39. Polygala, Tourn.
purpurea. Nutt.
verticillata. Linn.

P. Senega. Linn. 22.
incarnata. ϕ

XII. *Violaceæ.* D. C. 23.
40. Viola, Linn.
palmata. Linn.
cucullata. Ait.
sagittata. Ait.
blanda. Willd.
striata. Ait.
rostrata. Pursh.
pubescens. Ait.
Muhlenbergia. D. C.
41. Solea, Ging.
concolor. Ging. ϕ

XIII. *Droseraceæ.* D. C.
42. Parnassia, Tourn.
Caroliniana. Michx.
42. 2d. Drosera.
rotundifolia.

XIV. *Cistaceæ.* Juss.
43. Helianthemum, Tourn.
Canadense. Michx.
44. Lechea, Linn.
minor. Lam. ϕ.

XV. *Hypericaceæ.* Juss.
45. Hypericum, Linn.
pyramidatum. Ait.
prolificum. Linn.
perforatum. Linn. 24.
corymbosum. Muhl.
mutilum. Linn.
Sarothra. Michx.

XVI. *Illecebraceæ.* R. Br.
46. Anychia, Michx.
dichotoma. Michx.
47. Spergula, Bartl.
arvensis? Linn.

XVII. *Caryophyllaceæ.* Juss.
48. Mollugo, Linn.
verticillata. Linn.
49. Arenaria, Linn.
serpyllifolia. Linn.
50. Stellaria, Linn.
media. Smith.
S. longifolia. Muhl.
51. Cerastium, Linn.
viscosum. Linn.
nutans. Raf.
vulgatum. Linn.
52. Silene, Linn.
stellata. Ait.
noctiflora? Linn.
Virginica. Linn. 25.
regia. Sims.
53. Lychnis, D. C.
Githago. Lam.
54. Saponaria, Linn.
officinalis. Linn. 26.

XVIII. *Portulaccaceæ.* Juss.
55. Portulacca, Tourn.
oleracea. Linn.
56. Claytonia, Linn.
Virginica. Linn.

XIX. *Linaceæ.* D. C.
57. Linum, Linn.
Virginianum. Linn.

XX. *Geraniaceæ.* D. C.
58. Geranium, Linn.
maculatum. Linn. 27.
Carolinianum. Linn.

XXI. *Balsaminaceæ.* A. Rich.
59. Impatiens, Linn. 28.
pallida. Nutt.
fulva. Nutt.

XXII. *Limnanthaceæ.* R. Br.
60. Floerkia, Willd.
proserpinacoides. Willd.

XXIII. *Oxalidaceæ.* D. C.
61. Oxalis, Linn. 29.
violacea. Linn.
corniculata. Linn.
stricta. Linn.

XXIV. *Zanthoxylaceæ.* Ad. Juss.
62. Zanthoxylum, Linn.
Americanum. Mill. Dict. 30.
63. Ptelea, Linn.
trifoliata. Linn.*

*** Shrubby trefoil. Swamp dog-wood. Stinking Ash. Tonic and aromatic, said to cure intermittents, and to have been used with some success as a substitute for hops. Lindley, *Int. Nat. Syst.* 129 Riddell, *Synop. West. Flor.***

XXV. *Anacardiaceæ.* R. Br.
64. Rhus, Linn.
typhina. Linn.
glabra. Linn. 31.
Copallina. Linn.
venenata. D. C. 32.
Toxicodendron. Linn. 33.

XXVI. *Malvaceæ.* Juss. 34.
65. Malva, Linn.
rotundifolia. Linn.
66. Sida, Linn.
spinosa. Linn.
dioica. Cav.
67. Abutilon, Dill.
Avicennæ. Gærtn.
68. Hibiscus, Linn.
militaris. Cav.

XXVII. *Tiliaceæ.* Juss.
69. Tilia, Linn.
Americana. Linn. 35.

XXVIII. *Vitaceæ.* Juss.
70. Ampelopsis, Michx.
quinquifolia. Michx. 36.
71. Vitis, Linn.
aestivalis. Michx. 37.
cordifolia. Michx. 38.
Labrusca. Linn.*

XXIX. *Aceraceæ.* Juss.
72. Acer, Moench.
spicatum. Linn.
saccharinum. Linn.
dasycarpum. Ehrh.
rubrum. Linn. 39.
73. Negundo, Moench.
aceroides. Moench.

XXX. *Hippocastanaceæ.* D. C.
74. Æsculus, Linn.
glabra. Willd. 40.
flava. Ait.

XXXI. *Celastraceæ.* R. Br.
75. Staphylea. Linn.
trifoliata. Linn.
76. Celastrus, Linn.
scandens. Linn. 41.
77. Euonymus, Tourn.
atropurpureus. Jacq. 42.
Americanus. Linn.

XXXII. *Rhamnaceæ.* Juss.
78. Rhamnus, Linn.
lanceolatus. Pursh.
79. Ceanothus. Linn.
Americanus. Linn. 43.

XXXIII. *Leguminosæ.* Juss.
80. Vicia, Tourn.
Caroliniana. Walt.
81. Lathyrus, Linn.
palustris. Linn.
82. Apios, Boerh.
tuberosa. Moench.
83. Amphicarpæa, Ell.
monoica. Tor. & Gr.
84. Robinia, Linn.
pseudacacia. Linn.
85. Tephrosia, Pers.
Virginiana. Pers.
86. Psoralea, Linn.
onobrychis. Nutt.
87. Mellilotus, Tourn.
leucantha. Kock.
88. Trifolium, Tourn.
pratense. Linn.
repens. Linn.
reflexum. Linn.
89. Desmodium, D. C.
rotundifolium, D. C.
Canadense. D. C.
acuminatum. D. C.
nudiflorum. D. C.
cuspidatum. Tor. & Gr.
Marilandicum. Boott.
canescens. D. C.
Dillenii. Darlingt.
90. Lespedeza, Michx.
procumbens. Michx.
violacea. Pers.
and several var.
repens. Tor. & Gr.
capitata. Michx.

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* Said to be indigenous in the Scioto Valley. Fox grape. Gardens.

L. hirta. Ell.
91. Stylosanthes, Swartz.
elatior. Swartz. §
92. Baptisia, Vent.
leucantha. Tor. & Gr.
tinctoria. R. Br. 44.
93. Cassia, Linn.
Marilandica. Linn. 45.
nictitans. Linn.
94. Cercis, Linn.
Canadensis. Linn.
95. Gymnocladus, Lam. ¶
Canadensis. Lam.
96. Gleditschia, Linn.
triacanthos. Linn.

XXXIV. *Rosaceæ.* Juss.

97. Prunus, Tourn.
Americana. Marshall.
98. Cerasus, Juss.
Virginiana. D. C.
serotina. D. C. 46.
99. Spiræa, Linn.
opulifolia. Linn.
salicifolia. Linn.
lobata. Murr.
Aruncus. Linn.
100. Gillenia, Moench.
stipulacea. Nutt. 47. §
101. Geum, Linn.
Virginianum. Linn. 48.
strictum. Ait.
vernum. Tor. & Gr.
102. Waldsteinia, Willd.
fragaroides. Tratt.
103. Sanguisorba, Linn.
Canadensis. Linn.
104. Agrimonia, Tourn.
Eupatoria. Linn.
105. Potentilla, Linn.
Norvegica. Linn.
Canadensis. Linn.
var. pumila. Tor. & Gr.
fruticosa. Linn.
106. Fragaria, Tourn.
Virginiana. Ehrh.
107. Rubus, Tourn.
odoratus. Linn.
Canadensis. Linn. 51.
occidentalis. Linn.
villosus. Ait.
108. Rosa, Tourn.
R. setigera. Michx.
Carolina. Linn.
lucida? Ehrh.
rubiginosa. Linn.
109. Cratægus, Linn.
Crus-galli. Linn.
and var.
coccinea. Linn.
tomentosa? Linn.
punctata? Jacq.
110. Pyrus, Linn.
coronaria. Linn.
arbutifolia. Linn. f.
111. Amelanchier, Medic.
Canadensis. Tor. & Gr.
var. Botry apium. T. & G.

XXXV. *Lythraceæ.* Juss.

112. Lythrum, Linn.
Hyssopifolia. Linn.
113. Decodon, Gmel.
verticillatum. Ell. ¶
114. Cuphea, Jacq.
viscosissima. Jacq. ¶

XXXVI. *Onagraceæ.* Juss.

115. Epilobium, Linn.
coloratum. Muhl.
palustre? Linn.
116. Œnothera, Linn.
biennis. Linn.
fruticosa. Linn.
117. Gaura, Linn.
biennis. Linn.
118. Ludwigia, Linn.
alternifolia. Linn.
polycarpa. Short. & Peter.
palustris. Ell.
119. Circæa, Tourn.
Lutetiana. Linn.
120. Myriophyllum, Vaill.
verticillatum? Linn. ¶

XXXVII. *Passifloraceæ.* Juss.

121. Passiflora, Linn.
lutea. Linn.

XXXVIII. *Cucurbitaceæ.* Juss.

122. Sicyos, Linn.
angulatus. Linn.
123. Echinocystis, Tor. & Gr.
lobata. Tor. & Gr. ¶

XXXIX. *Grossulaceæ.* D. C.
124. Ribes, Linn.
Cynosbati. Linn.
floridum. L' Her.

XL. *Crassulaceae.* Juss.
125. Sedum, Linn.
ternatum. Michx.
126. Penthorum, Gronov.
sedoides. Linn

XLI. *Saxifragaceae.* Juss.
127. Saxifraga, Linn.
Virginiensis. Michx.
Pennsylvanica. Linn.
128. Heuchera, Linn.
Americana. Linn. 52.
129. Mitella, Tourn.
diphylla. Linn.
130. Tiarella, Linn.
cordifolia. Linn.
131. Chrysosplenium, Tourn.
Americanum. Schwein.
132. Hydrangea, Gronov.
arborescens. Linn.

XLII. *Hamamelaceae.* R. Br.
133. Hamamelis, Linn.
Virginiana. Linn. 53.

XLIII. *Umbelliferae.* Juss.
134. Sanicula, Tourn.
Marilandica. Linn. 54.
135. Eryngium, Tourn.
aquaticum. Linn. 55.
136. Cicuta, Linn.
maculata. Linn. 56.
137. Sium, Linn.
latifolium. Linn.
138. Cryptotænia, D. C.
Canadensis. D. C.
139. Zizia, Koch.
aurea. Koch.
integerrima. D. C.
140. Thaspium, Nutt.
cordatum. Tor. & Gr.
barbinode. Nutt.
141. Archangelica, Hoffm.
atropurpurea. Hoffm. 57.
A. hirsuta. Tor. & Gr.
142. Archemora, D. C.
rigida. D. C.
143. Pastinaca, Tourn.
sativa. Linn.
144. Heracleum, Linn.
lanatum. Michx. 58.
145. Chærophyllum, Linn.
procumbens. Lam.
146. Osmorhiza, Raf.
longistylis. D. C.
brevistylis. D. C.
147. Conium, Linn.
maculatum. Linn. 59.
148. Erigenia, Nutt.
bulbosa. Nutt.

XLIV. *Araliaceae.* Juss.
149. Aralia, Linn.
racemosa. Linn. 60.
nudicaulis. Linn. 61.
150. Panax, Linn
quinquefolia. Linn. 62.

XLV. *Cornaceae.* D. C.
151. Cornus, Tourn.
alternifolia. Linn.
stolonifera. Michx.
sericea. Linn. 63.
florida. Linn. 64.
paniculata. L' Her. ¶

B. Monopetalous plants.

XLVI. *Aquifoliaceae.* D. C.
152. Prinos, Linn.
verticillatus. Linn. 65.

XLVII. *Ericaceae.* Juss.
153. Gaultheria, Linn.
procumbens. Linn. 66.
154. Andromeda, Linn.
arborea. Linn.
155. Kalmia, Linn.
latifolia. Linn. 67.
augustifolia.* Linn. §
156. Epigea, Linn.
repens. Linn.
157. Rhododendron, Linn.

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* It is due to Mr. Sullivant to say that he has marked the locality, "Lancaster, Ohio." with doubt. In his frequent Botanical explorations in our county since that time, he, as well as myself, have been on the "look-out" for the little K. augustifolia, but hitherto unsuccessfully.

R. maximum. Linn. 68.
calendulaceum.†

XLVIII. *Vaccinaceae.* D. C.
158. Vaccineum, Linn.
Pennsylvanicum. Lam.
stamineum. Linn.
resinosum. Ait.
159. Oxycoccus, Pers.
macrocarpus. Pursh.

XLIX. *Pyrolaceae.* Lindl.
160. Pyrola, Linn.
rotundifolia. Linn.
maculata. Linn. 70.
161. Monotropa, Linn.
uniflora. Linn.
hypopithys. Linn.

L. *Campanulaceae.* Juss.
162. Campanula, Linn.
Americana. Linn.
amplexicaulis. Michx.
aparinoides. Pursh.

LI. *Lobeliaceae.* Juss.
163. Lobelia, Linn.
Claytoniana. Michx.
Cardinalis. Linn. 71.
inflata. Linn. 72.
Kalmii. Linn.
syphilitica. Linn. 73.

LII. *Plantaginaceae.* Juss.
164. Plantago, Linn.
major. Linn. 74.
cordata. Lam.
lanceolata. Linn.
Virginica? Linn.

LIII. *Dipsaceae.* Juss.
165. Dipsacus, Linn.
sylvestris. Linn.

LIV. *Valerianaceae.* Dufr.
166. Valeriana, Neck.
pauciflora. Michx. 75.
167. Fedia, Gaert.
radiata. Michx.

F. Fagopyrum. Tor. & Gr.
—— —— sp. nov. ?

LV. *Compositae.* Adans.
168. Hieracium. Linn.
paniculatum. Willd. 76.
venosum. Linn.
marianum. Willd.
Gronovii. Linn.
169. Prenanthes, Linn.
alba. Linn.
cordata. Pursh.
racemosa. Michx.
virgata. Michx.
crepidenia. Michx.
170. Leontodon, Schreb.
Taraxacum. Linn. 77.
171. Cynthia, Don.
amplexicaule. Beck.
172. Lactuca, Linn.
elongata. Muhl. 78.
173. Agathyrsus, Don.
leucophæus. Don.
one undetermined.
174. Sonchus, Linn.
oleraceus. Linn.
spinulosus. Big.
175. Arctium, Linn.
lappa. Linn. 79.
176. Carduus, Linn.
lanceolatus. Linn.
Virginianus. Willd.
altissimus. Linn.
muticus? Nutt.
discolor. Nutt.
177. Vernonia, Linn.
præalta. Willd. 80.
one undetermined.
178. Liatris, Linn.
spicata. Willd. 81.
scariosa. Willd. 82.
179. Inula, Linn.
Helenium. Linn.
180. Gnaphalium, Linn.
dioicum. Linn.
uliginosum. Willd.
polycephalum. Michx. 84.
Germanicum? Smith.
181. Erigeron, Linn.

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† For the discovery of this splendid plant, represented by Pursh, and others, as being the most beautiful shrub in North America, we are indebted to the hospitality of Mr. Jacob Greene, who had found it a few days previously at the mouth of Clear Creek.

E. strigosum. Muhl.
Canadense. Linn. 85.
Philadelphicum. Linn.
bellidifolium. Linn.
182. Aster, Linn.
hyssopifolius, Linn.
Novæ-Angliæ. Linn.
miser. Linn.
Shortii. Boott.
6 or 7 other species undetermined.
183. Biotia, D. C.
macrophylla. D. C.
184. Diplopappus, Cass.
amygdalinus. Less.
linariifolius. Less.
185. Sericocarpus, Nees.
conyzoides. Nees. ϕ.
186. Solidago, Linn.
Canadensis. Linn.
flexicaulis. Linn.
rigida. Linn. 86.
graminifolia. Ell.
bicolor. Linn.
cæsia. Linn.
5 or 6 other species undetermined.
187. Boltonia, L'Her.
glastifolia. L'Her.
188. Eupatorium, Linn.
ageratoides. Linn. 87.
aromaticum. Linn.
perfoliatum. Linn. 88.
sessilifolium. Linn. 89.
purpureum. Linn. 90.
trifoliatum. Linn.
maculatum? Linn.
189. Cacalia, Linn.
atriplicifolia. Linn.
suaveolens. Linn.
tuberosa. Nutt.
190. Senecio, Linn.
aureus. Linn. 91.
hieracifolius. Linn.
191. Helenium, Linn.
autumnale. Linn.
192. Helianthus, Linn.
5 or 6 species undetermined.
193. Heliopsis, Pers.
lævis. Pers.
194. Rudbeckia, Linn.
R. fulgida. Ait.
hirta. Linn.
triloba. Linn.
laciniata. Linn.
195. Echinacea, Mœnch.
purpurea. Mœnch. 93.
196. Coreopsis, Linn.
trichosperma. Michx.
197. Chrysostemma, Less.
tripteris. Less.
198. Actinomeris, Nutt.
alternifolia. D. C.
199. Bidens, Linn.
chrysanthemoides. Michx.
frondosa. Linn. 94.
cernua, Linn.
petiolata. Nutt.
200. Polymnia, Linn.
Canadensis. Linn.
201. Silphium, Linn.
perfoliatum. Linn. 95.
ternatum. Linn.
pinnatifidum. Ell.
202. Anthemis, Linn.
Cotula. Linn. 96.
203. Achillea, Linn.
millifolium. Linn. 97.
204. Tanacetum, Linn.
vulgare. Linn. 98.
205. Ambrosia, Linn.
trifida. Linn.
elatior. Linn.
206. Xanthium, Linn.
strumarium. Linn.

LVI. *Stellatae.* Juss.
207. Galium, Linn.
aperine. Linn. 99.
circæzans. Michx. 100.
trifidum. Linn.
asprellum. Michx. 101.
triflorum. Michx.
lanceolatum. Torr.
pilosum, Ait.
obtusum. Big.

LVII. *Cinchonaceae.* Lindl.
208. Cephalanthus, Linn.
occidentalis. Linn. 102.
209. Hedyotis, Lam.
cœrulea. Hook.
longifolia. Hook.
210. Mitchella, Linn.

M. repens. Linn. 103.

LVIII. *Caprifoliaceae.* Juss.
211. Lonicera, R. & S.
parviflora. Lam.
212. Triosteum, Linn.
perfoliatum. Linn. 104.
213. Viburnum, Linn.
prunifolium. Linn. 105.
acerifolium. Linn.
dentatum. Linn.
lentago. Linn.
214. Sambucus, Linn.
Canadensis. 106.

LIX. *Asclepiadaceae.* R. Br.
215. Asclepias, Linn.
amoena. Linn.
incarnata. Linn. 107.
phytolaccoides. Lyon.
variegata. Linn.
Syriaca. Linn.
quadrifolia. Jacq.
verticillata. Linn.
tuberosa. Linn. 108.

LX. *Apocynaceae.* Juss.
216. Apocynum, Linn.
cannabinum. Linn. 109.
androsæmifolium. Linn.

LXI. *Gentianaceae.* Juss.
217. Gentiana, Linn.
crinita. Willd. 110.
saponaria. Willd.
quinqueflora. Willd.
218. Frasera, Walt.
Walteri. Michx. 111.
219. Sabbatia, Adans.
angularis. Pursh. 112.
220. Obolaria, Linn.
Virginica. Linn.

LXII. *Convolvulaceae.* Juss.
221. Convolvulus, Linn.
panduratus. Linn. 113.
sepium. Linn. 114.
222. Cuscuta, Linn.
Americana. Linn.

LXIII. *Polemoniaceae.* Lindl.
223. Polemonium, Linn.
reptans. Linn. 115.
224. Phlox, Linn.
paniculata. Linn.
maculata. Linn.
aristata. Michx.
divaricata. Linn.
subulata. Linn.

LXIV. *Ebenaceae.* Vent.
225. Diospyrus, Linn.
Virginiana, Linn. 116

LXV. *Oleaceae.* Lindl.
226. Fraxinus, Linn.
sambucifolia. Willd.
acuminata. Linn.
quadrangularis. Willd.
227. Ligustrum, Linn.
vulgare. Linn.

LXVI. *Primulaceae.* Vent.
228. Dodecatheon, Linn.
media. Linn.
229. Lysimachia, Linn.
ciliata. Linn.
hybrida. Michx.
quadrifolia. Linn.
capitata. Pursh.
revoluta. Nutt.
stricta. Ait.
230. Samolus, Linn.
Valerandi, Linn.
231. Anagalis, Linn.
arvensis, Linn. 118

LXVII. *Lentibulaceae.* Rich.
232. Utricularia, Linn.
vulgaris, ? Linn.
fornicata, Le Conte.

LXVIII. *Orobanchaceae,* Juss.
233. Orobanche, Linn.
Americana, Linn.
234. Epifagus, Nutt.
Americanus, Nutt. 120

LXIX. *Scrophulariaceae,* Juss.
235. Leptandra, Nutt.
Virginica, Nutt. 120 2d
236. Veronica, Linn.
Anagalis, Linn.
officinalis, Linn.
arvensis, Linn.

V. scutellata, Linn.
serpyllifolia, Linn.
237. Buchnera, Linn.
Americana, Linn.§
238. Scrophularia, Linn.
Marilandica, Linn.
239. Antirrhinum, Linn.
linaria, Linn. 121
240. Mimulus, Linn.
ringens, Linn.
alatus, Linn.
241. Gratiola, Linn.
Virginica, Linn.
242. Lindernia, Linn.
dilatata, Muhl.
attenuata, Muhl.
243. Chelone, Linn.
glabra, Linn. 122
244. Penstemon, Linn.
pubescens, Linn.
245. Collinsia, Nutt.
verna, Nutt.
246. Gerardia, Linn.
purpurea, Linn.
tenuifolia, Linn.
auriculata, Michx.
flava, Linn.
glauca, Eddy.
247. Seymeria, Pursh.
macrophylla, Nutt.
248. Pedicularis, Linn.
Canadensis, Linn.‡
pallida, Pursh.
249. Euchroma, Nutt.
coccinea, Nutt.

LXX. *Solanaceae*, Juss.

250. Solanum, Linn.
nigrum, Linn. 123
Carolinense, Linn. ¶
dulcamara, Linn. 124
251. Physalis, Linn.
Pennsylvanica? Linn.
viscosa, Linn.
252. Nicandra, Adans.
physaloides, Pers.
253. Datura, Linn.
stramonium, Linn. 125
254. Verbascum, Linn.
Thapsus, Linn. 126
Blattaria, Linn.

LXXI. *Pedaliaceae* R. Br.

255. Martynia, Linn.
proboscidea, Linn. ¶

LXXII. *Bignoniaceæ*, Juss.

256. Bignonia, Linn.
radicans, Linn.
257. Catalpa, Juss.
cordifolia, Ell. ¶

LXXIII. *Verbenaceae*, Juss.

258. Verbena, Linn.
hastata, Linn. 127
urticæfolia, Linn.
259. Zapania, Link.
nodiflora, Lam. ¶
260. Phryma, Linn.
leptostachya, Linn.

LXXIV. *Labiatae*, Juss.

261. Lycopus, Linn.
Virginicus, Linn. 128
sinuatus, Ell.
262. Mentha, Linn.
Canadensis, Linn.
piperita, Linn. 129
viride, Walt.
263. Pycnanthemum, Michx.
linifolium, Pursh. 130
muticum, Pers.
incanum, Michx.
264. Lophanthus, Benth.
nepetoides, Benth.
scrophulariæfolius, Benth.
265. Lamium, Linn.
amplexicaule, Linn.
266. Teucrium, Linn.
Canadense.
267. Trichostema, Linn.
linearis, Walt.
268. Collinsonia, Linn.
Canadensis, Linn. 131
269. Monarda, Linn.
allophylla, Michx.
fistulosa, Linn. 132
270. Blephilia, Raf.
ciliata, Raf.
hirsuta, Raf. 133
271. Cunila, Linn.
Mariana, Linn. 134
272. Leonurus, Linn.

L. cardiaca, Linn. 135
273. Physostegia. Benth.
Virginiana, Benth.
274. Stachys. Linn.
aspera, Michx.
sylvatica? Linn.
275. Nepeta. Linn.
Cataria, Linn. 136
Glechoma. Benth. 136
276. Marrubium. Linn.
vulgare. Linn. 137
277. Hedeoma. Pers.
pulegioides, Pers. 138
278. Prunella, Linn.
vulgaris. Linn. 139
279. Scutellaria. Linn.
galericulata. Linn.
lateriflora, Linn. 140
canescens. Nutt.
nervosa? Pursh.
parvula, Michx.

LXXV. *Boraginaceae.* Juss.
280. Lithospermum, Linn.
officinale, Linn.
arvense. Linn.
281. Batschia. Gmel.
canescens. Michx.
282. Onosmodium. Michx.
hispidum. Michx.
283. Symphytum. Linn.
officinale. Linn.
284. Myosotis. Linn.
arvensis. Sibth.
285. Echinospermum. Swartz.
Virginianum. Lehm.
lappula, Lehm. ¶
286. Cynoglossum. Linn.
officinale. Linn. 141
amplexicaule. Mich.
287. Pulmonaria, Linn.
Virginica, Linn. 142

LXXVI. *Hydrophyllaceae*, Lindl.
288. Hydrophyllum. Linn.
Virginicum. Linn.
Canadense. Willd.
macrophyllum. Nutt.? ‡
289. Nemophila. Nutt.
paniculata, Spreng.
290. Phacelia, Juss.
P. fimbriata, Michx.
parviflora, Pursh.

C. APETALOUS PLANTS.

LXXVII. *Lauraceae*, Juss.
291. Laurus. Linn.
sassafras. Linn. 143
Benzoin, Linn. 144

LXXVIII. *Aristolochiaceae*, Juss.
292. Aristolochia. Linn.
serpentaria, Linn. 145
293. Asarum. Linn.
Canadense, Linn. 146

LXXIX. *Santalaceae*, Brown.
294. Nyssa. Linn.
multiflora, Walt.
295. Comandra. Nutt.
umbellata. Nutt.

LXXX. *Thymelaceae*, R. Br.
296. Dirca, Linn.
palustris, Linn. 147

LXXXI. *Urticae*, Lindley.
297. Urtica, Linn.
Canadensis, Linn.
pumila. Linn.
dioica. Linn.
298. Parietaria. Linn.
Pennsylvanica, Muhl.
299. Cannabis. Linn.
sativa. Linn.
300. Humulus. Linn.
lupulus. Linn, 148
301. Boehmeria. Linn.
cylindrica, Willd.

LXXXII. *Ulmaceae*, Mirb.
302. Ulmus, Linn.
Americana, Linn.
fulva. Michx. 149
303. Celtis. Linn.
crassifolia, Lam.

LXXXIII. *Artocarpeae*, R. Br.
304. Morus. Linn.
rubra. Linn.

LXXXIV. *Cupuliferae*, Rich.

305. Quercus, Linn.
imbricaria, Michx.
tinctoria, Bartr. 150
coccinea, Wangh.
rubra, Linn.
palustris? Michx.
macrocarpa, Linn.
alba, Linn. 151
montana, Willd.

[Two or three other species not determined for the want of fruit.]

306. Castanea, Tourn.
vesca, Willd.
307. Corylus, Linn.
Americanus, Walt.
308. Fagus, Linn.
sylvatica.

LXXXV. *Juglandaceae*, D. C.

309. Juglans, Linn.
nigra, Linn.
cinerea, Linn. 152
310. Carya, Nutt.
alba, Nutt.
tomentosa, Nutt.
sulcata, Nutt.
porcina? Nutt.
amara, Nutt.

LXXXVI. *Euphorbiaceae*, Lindl.

311. Acalypha, Linn.
Virginica, Linn. 153
312. Euphorbia, Linn.
hypericifolia, Linn. 154
maculata, Linn.
corollata, Linn. 155
obtusata, Pursh.
one other undetermined.

LXXXVII. *Amaranthaceae*, Juss.

313. Amaranthus, Linn.
hybridus, Linn.

LXXXVIII. *Chenopodiaceae*, D. C.

314. Chenopodium, Linn.
rhombifolium, Muhl.
album, Linn.
ambrosioides, Linn. 156
botrys, Linn. 157
hybridum, Linn.

LXXXIX. *Phytolaccaceae*, Lindl.

315. Phytolacca, Linn.
decandra, Linn. 158

XC. *Polygoniaceae*, Lindl.

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tenue, Michx.
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D. ACHLAMYDEOUS PLANTS.

XCI. *Betulaceae*, Rich.

318. Betula, Linn.
lenta, Linn.
nigra, Linn.*
319. Alnus, Willd.
serrulata, Willd.
320. Carpinus, Linn.
Americana, Willd.
321. Ostrya, Michx.
Virginica, Willd.

XCII. *Salicaceae*, Rich.

322. Salix, Linn.
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conifera, Wangh.
Muhlenbergiana? Willd.
vitellina, Linn.
lucida? Muhl.
Purshiana, Spreng.

---

*Perry County.

323. Populus, Linn.
candicans, Ait.
tremuloides.
grandidentata, Michx.
lævigata, Ait.

XCIII. *Platanaceae*, Lestib.
324. Platanus, Linn.
occidentalis, Linn.

XCIV. *Saururaceae*, Rich.
325. Saururus, Linn.
cernuus, Linn. 164

XCV. *Callitrichaceæ*, Link.
326. Callitriche, Linn.
verna, Willd.?
Var. intermedia, Torr.

Tribe II. GYMNOSPERMÆ.
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XCVI. *Coniferæ*, Juss.
327. Juniperus, Linn.
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328. Pinus, Linn.
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rigida, Linn. 166
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SUB-CLASS II.
MONOCOTYLEDINOUS PLANTS.

A. PETALOIDEÆ.

XCVII. *Alismaceæ*, R. Br.
329. Alisma, Linn.
plantago, Linn.
330. Sagittaria, Linn.
sagittifolia, Willd.
acutifolia? Pursh.

XCVIII. *Hydrocharaceæ*, Juss.
331. Udora, Nutt.
Canadensis, Nutt.
332. Valisneria, Linn.
Spiralis, var. Americana, [Torr.

XCIX. *Commelinaceæ*, Lindl.
333. Tradescantia, Linn.
Virginica, Linn.

C. *Xyridaceæ*, Kunth.
334. Xyris, Linn.
Caroliniana, Walt.

CI. *Hypoxidaceæ*, Brown.
335. Hypoxis, Linn.
erecta, Linn.

CII. *Iridaceæ*, Juss.
336. Iris, Linn.
versicolor, Linn. 168
lacustris, Nutt.*
337. Sisyrinchium, Linn.
mucronatum, Michx.
anceps, Linn. 169

CIII. *Orchidaceæ*, Juss.
338. Goodyera, R. Br.
pubescens, R. Br.
339. Pogonia, R. Br.
ophioglossoides, R. Br.
340. Calopogon, R. Br.
pulchellus, R. Br.
341. Corallorhiza, R. Br.
multiflora, Nutt.
342. Aplectrum, Nutt.
hyemale, Nutt.
343. Orchis, Linn.
spectabilis, Linn.
344. Platanthera, Rich.
orbiculata, Lindl. 170
345. Habenaria, Willd.
psycodes, Michx.
lacera, Michx.
flava, Torr.?
1 or 2 others undetermined.
346. Spiranthes, Rich.
tortilis, Rich.
cernua, Rich.
347. Liparis, Rich.
liliifolia, Rich.
348. Microstylis, Nutt.
ophioglossoides, R. Br.
349. Cypripedium, Linn.
acaule, Ait.
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parviflorum, Willd.
spectabile, Swartz.

CIV. *Junceæ*, Juss.
350. Juncus, Linn.
effusus, Linn.
polycephalus, Michx.

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*Hocking County.

J. tenuis, Willd.
marginatus, Rostk.
351. Luzula, D. C.
pilosa, Willd.
campestris, D. C.

CV. *Melanthaceæ*, R. Br.
352. Leimanthium, Willd.
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353. Helonias, Linn.
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354. Veratrum, Linn.
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CVI. *Pontederaceæ*, Kunth.
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graminea, Vahl.

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360. Smilacina, Desf.
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biflorum, Ell.
362. Gyromia, Nutt.
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363. Trillium, Linn.
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grandiflorum, Salisb.
364. Uvularia, Linn.
grandiflora? Smith
365. Styrandra, Raf.
bifolia, Raf.
CIX. *Dioscoreaceæ*, R. Br.
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CX. *Liliaceæ*, Juss.
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369. Phalangium, Tourn.
esculentum, Nutt.

CXI. *Typhaceæ*, Lindl.
370. Sparganium, Linn.
ramosum, Smith.
Americanum, Nutt. ¶
371. Typha, Linn.
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CXII. *Araceæ*, Juss.
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373. Arum, Linn.
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374. Symplocarpus, Salisb.
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375. Rensselaeria, Beck.
Virginica, Beck.

CXIII. *Fluviales*, Lindl.
376. Potamogeton, Linn.
natans, Linn.
compressum, Linn.
gramineum, Michx.

CXIV. *Juncaginaceæ*, Rich.
377. Triglochin, Linn.
maritimum, Linn.

CXV. *Pistiaceæ*, Rich.
378. Lemna, Linn.
trisulca, Linn.
polyrrhiza, Linn.
minor, Linn.

B. GLUMACEÆ.
CXVI. *Gramineæ*, Juss.
Oryzeæ.
379. Leersia, Soland.
oryzoides, Swartz.
Virginica, Willd.
380. Zizania, Linn.
aquatica, Lam.

Phalarideæ.
381. Alopecurus, Linn.
geniculatus, Linn.
382. Phleum, Linn.
pratense, Linn.
Paniceæ.
383. Digitaria, Haller.
glabra, R. & S.
sanguinalis, Scop.
384. Oplismenus, P. de B.
Crus-galli, P. de B.
385. Panicum, Linn.
capillare, Linn.
clandestinum, Linn. ¶
latifolium, Linn.
nitidum, Linn.
involutum, Torr.
386. Pennisetum, Rich.
glaucum, Nutt.
viride, Nutt.
Stipaceæ.
387. Aristida, Linn.
dichotoma, Michx.
stricta ? Michx.
Agrostideæ.
388. Agrostis, Linn.
polymorpha, Hud.
389. Cinna, Linn.
arundinacea, Linn.
390. Muhlenbergia, Schreb.
Brachyelytrum, Trin.
diffusa, Schreb.
Mexicana, Trin.
391. Trichodium, Linn.
scabrum, Muhl.
Arundinaceæ.
392. Calamagrostis, Adans.
Canadensis, P. de B.
393. Phragmites, Trin.
communis, Trin.
Chlorideæ.
394. Eleusine, Gaertn.
Indica, Lam.
Avenaceæ.
395. Anthoxanthum, Linn.
odoratum, Linn.
396. Hierochloa, Gmel.
borealis, R. & S.
397. Aira, Linn.
flexuosa, Linn.
398. Avena, Linn.
A. palustris, Michx.
399. Danthonia, D. C.
spicata, R. & S.
Festucaceæ.
400. Bromus, Linn.
pubescens, Muhl.
purgans, Linn.
secalinus, Linn.
401. Dactylis, Linn.
glomerata, Linn.
402. Diarrhena, P. de B.
Americana, P. de B.
403. Festuca, Linn.
nutans, Willd.
pratensis, Huds.
tenella, Willd.
404. Glyceria, R. Br.
fluitans, R. Br.
acutifolia, Torr.
405. Kœlleria, Pers.
truncata, Torr.
Pennsylvanica, D. C.
obtusata, Torr.
406. Poa, Linn.
annua, Linn.
capillaris, Linn.
compressa, Linn.
dentata, Torr.
Eragrostis, Linn.
nervata, Willd.
pilosa, Linn.
pratensis, Linn.
reptans, Michx.
trivialis, Linn.
brevifolia, Muhl.
407. Elymus, Linn.
Canadensis, Linn.
Hystrix, Linn.
striatus, Willd.
villosus, Muhl.
Virginicus, Linn.
Sacchrineæ.
408. Andropogon, Linn.
furcatus, Muhl.
nutans, Linn.
scoparius, Michx.

CXVII. *Cyperaceæ.*
Cyperæ.
409. Cyperus, Linn.
diandrus, Torr.

C. filiculmis, Vahl.
repens, Ell.
speciosus, Torr.
strigosus, Linn.
401. Dulichium, Rich.
spothaceum, Pers.
411. Kyllingia, Rottb.
pumila, Michx.
Scirpæ.
412. Isolepis, R. Br.
capillaris, R. & S.
413. Eleocharis, R. Br.
acicularis,
obtusa, Schult.
tennis, Schult.
414. Scirpus, Linn.
atrovirens, Muhl.
brunneus, Muhl.
lacustris, Linn.
maritimus, Linn.
415. Tricophorum, Pers.
cyperinum, Pers.
lineatum, Pers.
416. Rhynchospora, Vahl.
alba, Vahl.
Scleriæ.
417. Scleria Bergius.
panciflora, Muhl. ◊
triglomerata, Michx. ◊
Caricæ.
418. Carex, Linn.
acuta, Linn.
anceps, Muhl.
arida, Schw. & Torr.
bromoides, Schk.
bullata, Schk.
Careyana, Dewey.
cephalaphora, Muhl.
C. crinita, Lam.
cristata, Schw.
Davisii, Schw. & Torr.
digitalis, Muhl.
decomposita, Muhl.
festucacea, Schk.
gracillima, Schw.
granularis, Muhl.
hirsuta, Willd.
Hitchcockiana, Dewey.
hystericina, Muhl.
intumescens, Rudge.
lacustris, Willd.
lanuginosa, Michx.
laxiflora, Lam.
lupulina, Muhl.
multiflora, Muhl.
Oligocarpa, Schk.
paniculata, Linn.
pellita, Muhl.
Pennsylvanica, Lam.
Pseudo-Cyperus, Linn.
pubescens, Muhl.
retroflexa, Muhl.
rosea, Schk.
Shortii, Torr.
sparganoides, Muhl.
squarrosa, Linn.
stellulata, Good.
stenolepis, Torr.
straminea, Willd.
sylvatica? Huds.
tentaculata, Muhl.
tetanica, Schk?
vesicaria, Linn.
virescens? Muhl.
vulpinoidea, Michx.
Willdenovii, Schk.

CLASS II. CELLULARES—(Flowerless Plants.)

Filicoid Plants.

CXVIII. *Equisetaceæ*, D. C.
419. Equisetum, ⅂inn. 186
hyemale, Linn.
arvense, Linn.
limosum? Linn.

CXIX. *Filices*, Juss.
420. Polypodium, Linn.
P. vulgare, Linn.
hexagonopterum, Michx.
connectile? Willd.
421. Onoclea, Linn.
sensibilis, Linn.
422. Aspidium, Swartz.
acrostichoides, Willd. 187
Thelypteris, Willd.
fragile, Willd.
bulbiferum, Willd.

A. felix-fœmina, Willd.
423. Asplenium, Linn.
rhizophyllum, Willd.
ebeneum, Willd.
trichomanes, Linn, §
thelypteroides, Michx.
424. Pteris, Linn.
aquilina, Linn. 188
425. Adiantum, Linn.
pedatum, Linn. 189
426. Osmunda, Linn.
cinnamomea, Linn.
O. interupta, Michx.
spectabilis, Willd. 190.
427. Ophioglossum, Linn.
vulgatum, Linn.
428. Botrychium, Swartz.
Virginicum, Swartz.

CXX. *Lycopodiaceæ*, D. C.
429. Lycopodium, Linn.
complanatum, Linn.
rupestre, Linn.
lucidulum.

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NOTES.

1 Clematis Virginiana, Linn. Common virgin's bower. Diuretic, diaphoretic and alterative. Wood & Bache, Append. 1078.

2 Clematis viorna, Linn. Leather flower. Emetic, diuretic, diaphoretic, &c. Barton. Wood & Bache, Append. 1078.

3 Hepatica triloba, Chaix. synon. Anemone hepatica, Linn. Hepatica Americana, Ker. Hepatica acutiloba, D. C. Liver-wort, Liver-leaf. Dr. Wood, in his remarks upon this plant, predicts that it will be forgotten as a medicine, a prophecy which is already very nearly fulfilled. Wood & Bache, U. S. Dis. 347. Torr. & Gray, Fl. N. A. 14.

4 Ranunculus Flammula, R. abortivus, R. repens, Linn. Crowfoot, Buttercups, &c. The whole of this extensive genus, (Drs. Torry and Gray enumerate 44

species,) possess powerfully acrid, rubefacient and vesicatory properties. Lindley, Int. Nat. Syst. P. 7. Wood and Bache, U. S. Dis. 543.

5 Actaea Alba, Bigelow. Syn. Actaea Americana, Pursh. Baneberry. White cohosh. Said to be much esteemed by the Indians. It has mild astringent and tonic properties. Wood and Bache, Append. 1067. Riddell, Synop. West. Fl.

6 Cimicifuga racemosa, Ell. Synon. Actaea racemosa, Linn. A. Monogyna. Walt. Macrotys racemosa, Rid. M. Actaeoides, Raf. M. Sepentaria, Eat. Botrophys serpentaria, Raf. B. Actaeoides, Fisch and Mey. Cimicifuga serpentaria, Pursh. Blacksnake root. Rattle weed. Tonic and astringent at the same time, stimulating the secretions of the skin, kidneys, uterus and pulmonary mucous membranes. Wood and Bache, U. S. Dis. 200. Torr. and Gray, Fl. N. A. 36.

7 Hydrastis Canadensis, Linn. Yellow puccoon. Ohio curcuma. Orange root. Stimulant and somewhat detergent, tonic. Lindley, Int. Nat. Syst. 7. Wood and Bache, Append. 1087. Riddell, Synop. West. Flor.

8 Magnolia acuminata, Linn. Cucumber tree. Gently stimulant, aromatic, tonic, diaphoretic, and febrifugal. Useful in chronic rheumatism and remittents, accompanied with a typhoid character. Wood and Bache, U. S. Dist. 417. Lindley, Int. Nat. Syst. 24.

9 Liriodendron Tulipifera, Linn. Tulip tree. Tulip bearing poplar. Yellow poplar. White Wood. Stimulating tonic, and diaphoretic. Useful in chronic rheumatism, dyspepsia, &c. It forms one of the ingredients to "Mile's Tomato Pill." Wood and Bache, U. S. Dis. 408. Lindley, Int. Nat. Syst. 24.

10 Menispermum Canadense. Moon seed. Yellow parilla. Tonic, diuretic. I have known it used as a detergent in cutaneous diseases in domestic practice. Riddell, Synop. West. Flor.

11 Leontice Thalictroides, Linn. Synon. Caulophyllum Thalictroides, Michx. Blue cohosh. Papoose root. Bitter diuretic. Riddell, Synop. West. Fl.

12 Jeffersonia Diphylla. Twin leaf. Rheumatism root. Stimulant, diaphoretic, anti-rheumatic, and anti-spasmodic. Said to be especially good in chronic rheumatism. Riddell, Synop. West. Fl.

13 Podophyllum Peltatum. May apple. Mandrake. Hydrogogue cathartic. Officinal. Wood and Bache, U. S. Dis. 518.

14 Brasenia Peltata, Pursh. Synon. Hydropeltis Purpurea, Michx. Water-target. Demulcent. Riddell, Synop. West. Fl.

15 Nuphar Advena. Yellow water-lily. Said to possess bitter, styptic, and discutient properties similar to Nymphaea adorata. Riddell, Synop. West. Fl.

16 Sanguinaria Canadensis. Blood-root. Red puccoon. Emetic, cathartic, expectorant, diaphoretic, &c. Officinal. Wood and Bache, U. S. Dis. 579. Lindley, Nat. Syst. 9.

17 Chelidonium majus. Celandine. Acrid, purgative, diuretic, and perhaps diaphoretic and expectorant. Wood and Bache. Append. 1076.

18 Dielytra Cucularia, D. C. Synon. Fumaria Cucullaria, Linn. Corydalis Cucullaria, Pers. Dutchman's breeches. Probably secernent, stimulant, diuretic and diaphoretic. Said to be used as a substitute for mercury in venereal complaints. Riddell, Synop. West. Fl.

19 Dielytra Canadensis, D. C. Synon. Corydalis Canadensis, Goldie. Squirrel corn. Turkey corn. Properties same as the preceding. Riddell, Synop. West. Fl.

20 Cruciferae. Nearly the whole of this very natural family of plants possess stimulating and anti-scorbutic properties. Lindley, Int. Nat. Syst. 17.

21 Sinapis Nigra. Black mustard. Laxative, emetic, stimulant, rubefacient. Wood and Bache, U. S. Dis. 612. Officinal.

22 Polygala Senega. Seneka snake root. Officinal. Stimulating expectorant and diuretic, in large doses, emetic and cathartic, diaphoretic and emmenagogue. Wood and Bache, U. S. Dis. 601. Dr. Lindley, Int. Nat. Syst. Bot. P. 143, says that the properties of this order, [Polygalaceae,] are not yet well investigated.

23 Violaceae. The violet tribe. Emetic, cathertic, demulcent and expectorant. It was at one time supposed that the Ipecacuanha of the shops was obtained from this order. If properly investigated, they doubtless will be found to possess some fine medicinal qualities. Lindley, Int. Nat. Syst. 144. Wood and Bache, U. S. Dis. 694.

24 Hypericum Perforatum. St. John's wort. In early times it had some reputation as a healing and pectoral medicine. I have known a high degree of inflammation of the mucous lining of the mouth and fauces produced by eating a few of the fresh leaves. Wood and Bache, Append. 1087.

25 Silene Virginica. Virginian catch-fly. Indian pink. Anthelmintic. I doubt, however, whether it possesses any virtues at all. A very common plant. Lindley, Int. Nat. Syst. 153. Riddell, Synop. West. Fl. Wood and Bache, Append. 1105.

26 Saponaria Officinalis. Soap wort. Bouncing Bet. Alterative, anti-venereal, &c. I have known country people to cultivate this plant in the garden under the name of "Carolina pink," and use it as a vermifuge. Wood and Bache, Append. 1103. Lindley, Int. Nat Syst. 154.

27 Geranium Maculatum. Cranesbill. Powerfully astringent. Officinal. It ought certainly to take the place of Kino and Catechu, two foreign medicines, with not a whit better pretensions to power and efficacy. Very common. Wood and Bache, U. S. Dis. 330.

28 Impatiens Pallida. Touch-me-not. False celandine. Snap weed. Impatiens fulva. Jewel weed. Balsam weed. These plants very much resemble each other, and both possess active properties. They are emetic, cathartic and diuretic. But on account of their activity are supposed to be dangerous. They deserve investigation. Wood and Bache, Append. 1088. Riddell, Synop. West. Fl. Lindley, Int. Nat. Syst. 140.

29 Oxalidaceæ. The wood sorrel tribe. Acidulous and refrigerant. Lindley, Int. Nat. Syst. 137. Wood and Bache, U. S. Dis. 10. Riddell, Synop. West. Fl.

30 Zanthoxylum Americanum, Mill Dict. Synon. Zanthoxylum Fraxineum, Willd. Prickly ash. Stimulant, diaphoretic, anti-rheumatic. Wood and Bache, U. S. Dis. 697. Lindley, Nat. Syst. 128.

31 Rhus Glabra. Sumach. Smooth sumach. Astringent, refrigerant. The acid surrounding the berry is stated by Mr. Cozzens of N. Y. to be malic. Torrey and Gray, Flor. N. A. 217. Wood and Bache, U. S. Dis. 556.

32 Rhus Venenata, D. C. Synon. Rhus Vernix, Linn. Poison sumach. Poison elder. Poison ash. Stimulant narcotic. Highly poisonous. Wood and Bache, U. S. Dis. 761.

33 Rhus Toxicodendron, Linn. Synon. Rhus Radicans, Linn. Poison ivy. Poison oak. Stimulant and narcotic. Poisonous, but not so highly as R. venenata. This plant attracted some notice a few years ago by being supposed to cause the "milk sickness." This, however, has been proved to be a mistake. Wood and Bache, U. S. Dis. 669. Lindley, Int. Nat. Syst. 126.

34 Malvaceae. The mallows tribe. The uniform character of this natural family is to abound greatly in mucilage, and it is moreover totally destitute of all unwholesome qualities. Lindley, Int. Nat. Syst. 33.

35 Tilia Americana, Linn. Synon. Tilia glabra, Vent. T. Canadensis, Michx. Linden or Linn tree. Bass wood. Emollient and mucilaginous. Riddell, Synop. West. Fl.

36 Ampelopsis quinquefolia, Michx. Synon. Vitis Hederacea, Willd. Hedera quinquefolia, Linn. Cissus Hederacea, Pers. Common creeper. American ivy. The late Dr. Eberle recommended it as an excellent expectorant in pulmonary complaints. The plant so nearly resembles in general appearance and habit the Rhus Toxicodendron var. Radicans, a very poisonous vine, as to be mistaken for it by many persons, and supposed to be poisonous. It can easily be distinguished, however, by its digitately 5-foliolate leaves; the leaves of the Rhus being 3-foliolate. Torrey and Gray. Flor. N. A. 245. Riddell, Synop. West. Fl.

37 Vitis Æstivalis, Michx. Synon. V. Vinifera, var. Americana, Marsh. V. Intermedia, Muhl. V. Palmata, Vahl. Summer grape. Pleasant, and may be used for making good wine. Our climate, however, is so variable as to render the crop uncertain. Torrey and Gray, Flor. N. A. 244.

38 Vitis Cordifolia, Michx. Synon. V. Vulpina, Torrey. Winter grape. Pigeon grape. Black grape. This hardy vine yields an abundance of fruit, and would doubtless produce wine every way equal to the excuse for "Port," which we are frequently obliged to depend upon. Professors Torrey and Gray, in their great national work, "Flora of North America," state that the stem is 10 to 20 feet long.

I have certainly seen it attain the altitude of the highest trees of our forest. Torrey and Gray, Fl. N. A. 244.

39 Acer Rubrum. Red maple. Soft maple. A very good astringent. In our school-boy times in the west, it afforded us the astringent ingredient for ink. Riddell, Synop. West. Flor.

40 Æsculus Glabra, Willd. Synon. Æ. Pallida, Willd. Æ. Echinata, Muhl. Æ. Ohioensis, D. C. Pavia Ohioensis, Michx. f. P. Pallida and Glabra, Spach. Ohio Buckeye. Fetid Buckeye. Emetic, narcotic and alterative. Dr. Drake. Riddell, Synop. W. F. Torrey and Gray, Flor. N. A. 251.

41 Celastrus Scandens. False bitter sweet. Climbing staff tree. Wax work. Narcotic, secernant, stimulant. Riddell, Synop. West. Fl.

42 Euonymus Atropurpureus. Indian arrow. Actively medicinal according to popular opinion. Riddell, Synop. West. Fl.

43 Ceanothus Americanus. New Jersey tea. Red root. Astringent, and according to Schoepf, purgative. An Indian remedy for syphilitic complaints. Wood and Bache, Append. 1076. Lindley, Int. Nat. Syst. 112.

44 Baptisia Tinctoria, R. Br. Synon. Sophoria Tinctoria, Linn. Podalyria Tinctoria, Lam. Wild indigo. Astringent, antiseptic, cathartic, emetic and stimulant. "An ointment made from the bark of the root is valuable in the cure of some forms of Herpes." Dr. Hor. Prof. Wood says that the general influence of this medicine upon the system, has not been accurately investigated. I think it is worthy of it. Wood and Bache, Append. 1072.

45 Cassia Marilandica. American senna. Wild senna. A very good cathartic. Officinal. Wood and Bache, U. S. Dis. 182.

46 Cerasus Serotina, D. C. Synonyms Prunus Virginiana, Mill Dict., U. S. Disp. P. Cartilaginea, Lehm. P. Serotina, Ehrh. Cerasus Virginiana, U. S. Dis., Michx. C. Sylvestris, Gron. Wild cherry. Black cherry. By an error of some of the older Botanists, the synonymy of this well known and valuable plant has been transposed with that of another species, (Cerasus Virginiana, D. C.; C. Obovata, Beck.; Prunus Virginiana, Linn.; P. Serotina, Pursh.; P. Obovata, Bigel.; Choke cherry,) which has lately been made manifest and corrected by the valuable labors of those able and indefatigable Botanists, Proffs. Torrey and Gray. The Prunus Virginianus of Linnæus, as appears from their researches, was founded on the choke cherry, altogether a different and distinct species. Anodyne tonic and febrifugal. A valuable medicine. Officinal. Wood and Bache, U. S. Dis. 536. Torrey and Gray, Flor. N. A. 410.

47 Gillenia Stipulacea, Nutt. Synon. Spiraea Stipulacea, Pursh. Western Gillenia. American ipecac. Mild and efficient emetic, and occasionally cathartic. In small doses it is thought to exert a tonic influence. Wood and Bache, U. S. Dis. 333.

48 Geum Virginianum. Avens. Virginian avens. Astringent. Riddell, Synop. West. Flor.

49 Sanguisorba Canadensis. Burnet saxifrage. Slightly astringent and tonic. Riddell, Synop. West. Fl.

50 Agrimonia Eupatoria. Agrimony. Astringent, corroborant and deobstruent. Wood and Bache, Append. 1067.

51 Rubus Canadensis, Linn., synon. R. trivialis, U. S. Dis. Dewberry. Low blackberry. Tonic, and strongly astringent. The whole of this genus, as indeed the whole of the natural order Rosaceæ generally, possess these properties in an eminent degree: nor are any of them unwholesome. Lindley, Int. Nat. Syst. 80. Wood and Bache, U. S. Dis. 560.

52 Heuchera Americana. Alum root. Powerfully astringent. Wood and Bache, U. S. Dis. 349.

53 Hamamelis Virginiana. Witch hazel. Astringent, sedative and discutient. Wood and Bache, Append. 1086.

54 Sanicula Marilandica. Indian sanicle. Diaphoretic, stimulant, stomachic. Riddell, Synop. West. Fl.

55 Eryngium aquaticum. Button snakeroot. Water eringo. Diaphoretic, and expectorant, and in large doses emetic. Wood and Bache, U. S. Dis. 296.

56 Cicuta maculata. American water hemlock. Narcotic. The European wa-

ter hemlock is superseded in the use internally, by the Conium, but is applied externally in local rheumatic and gouty pains in the form of anodyne poultices. Our plant possesses the same properties, perhaps in a less virulent degree. With proper trials it may be found a good substitute for the Conium maculatum. Very common, and widely diffused. Wood and Bache, Append. 1078.

57 Archangelica atropurpurea. Hoffm. synon. Angelica atropurpurea, Linn., Angelica triquinata, Mich., Imperatoria lucida, Nutt. Common angelica. Masterwort. An elegant aromatic tonic. But seldom used. Common. Wood and Bache, U. S. Dis. 86. Torr. and Gray, Flor. N. Amer. 621.

58 Heracleum lanatum. Cow parsnip. Somewhat stimulant and carminative. Wood and Bache, U. S. Dis. 348.

59 Conium maculatum. Hemlock. Introduced. Narcotic, without being decidedly stimulant or sedative. Wood and Bache, U. S. Dis. 255. It is a well known fact that the narcotic and poisonous properties which appear to be common to many umbelliferous plants, are very variable, owing to the dampness or dryness of the soil in which they grow; and it is a fact equally well known, that all our medicines of this class obtained from the shops, are equally variable, some being perfectly inert, while others are very active. It is thought by some that this variableness in strength depends mainly on the *manner* of their preparation; but I think it is much more reasonable to suppose that it depends upon the moisture of the soil in which they grow. I believe we are almost exclusively dependant upon Europe for our supplies of this class of drugs. Is this right? when our own fertile prairies yield an abundance of the principle upon which their virtues depend, in our indigenous umbelliferous plants.

60 Aralia racemosa. American spikenard. Aromatic, stimulant, and alterative. Wood and Bache, U. S. Dis. 106.

61 Aralia nudicaulis. False sarsaparilla. Wild sarsaparilla. Small spikenard. Gently stimulant and alterative. This and the preceding are supposed to possess properties similar to the sarsaparilla of the shops. Wood and Bache, U. S. Dis. 106.

62 Panax quinquefolia. Ginseng. Demulcent, and according to some stomachic. It has perhaps only acquired notoriety from the fact that the Chinese greatly overrated its medicinal powers, and for a good number of years depended upon us for their supplies. Wood and Bache, U. S. Dis. 494.

63 Cornus sericea. Purple osier. Cornus stolonifera. Red osier. Tonic and astringent. It is stated that an infusion of the young twigs will allay vomiting. Wood and Bache, U. S. Dis. 266. Riddell. Synop. Wes. Fl.

64 Cornus florida. Dogwood. Valuable tonic and astringent. Officinal. Wood and Bache, U. S. Dis. 265. Lindley, Int. Nat. Syst. 205.

65 Prinos verticillatus. Black alder. Winter berry. False alder. Tonic, astringent, and antiseptic. Wood and Bache, U. S. Dis. 534. Lindley, Int. Nat. Syst. 176.

66 Gaultheria procumbens. Spicy winter-green. Stimulating, aromatic, astringent, and emmenagogue. Wood & Bache, U. S. Dis. 326. Lindley, Int. Nat. Syst. 180

67 Kalmia latifolia. Laurel, calico bush. Stimulant, narcotic. Poisonous. Lindley, Nat. Syst. 180. Riddell, Synop. West. Flor.

68 Rhododendron maximum. Big laurel, American rose bay. Poison-

ous. Stimulant, narcotic. Lindley, Int. Nat. Syst. 180. Riddell Synop. West. Fl.

69 Vaccineum stamineum. Buck-berry. Sometimes used as a substitute for uva-ursi. Diuretic, tonic and slightly astringent. Riddell, Synop. West. Flor.

70 Pyrola maculata, Linn. Synon. Chimaphylla maculata, Pursh, U. S. Dis. Spotted winter-green. Diuretic &c. The Pyrola Umbellata, a closely allied species, is a very active diuretic. It is also tonic and astringent. Dr. Lindley, Int. Nat. Syst. p. 182, is mistaken in his remarks that our species is inert. Wood & Bache, U. S. Dis. 197. Riddell Synop. West Flor.

71 Lobelia Cardinalis. Cardinal flower. Anthelmintic? All writers appear to speak very doubtingly upon the medicinal virtues of this plant. Wood & Bache, U. S. Dis. 411. Lindley, Int. Nat. Syst. 185.

72 Lobelia Inflata. Indian tobacco. Low belia. Emetic, sudorific, and powerfully expectorant. This medicine is the "sine qua non" of the simon pure steam doctors. One of the most powerful articles of the materia medica, and belongs to an order that contains many plants of active and highly deleterious qualities. Lindley, Int. Nat. Syst. 184. Wood and Bache, U. S. Dis. 409.

73 Lobelia syphilitica. Blue cardinal flower. High belia. Emetic, cathartic, and diuretic; and at one time was supposed to be anti-syphilitic. Not much used. In the application of one of the common names to this plant, is a curious instance of committing a pun without committing a sin. This plant being much taller and more robust than the L. inflata which is frequently used in domestic practice under the name of Low belia, it was supposed as a matter of course by those better acquainted with its near affinity to Lobelia inflata, than with its etymology, that it *must* be *high belia*. Lindley, Int. Nat. Sys. 184. Wood & Bache, U. S. Dis. 409.

74 Plantago major. Plantain. Seeds mucilaginous and demulcent. Vulnerary. Wood and Bache, App. 1100. Lindley, Int. Nat. Syst. 191.

75 Valeriana pauciflora. Western Valerian. Tonic, anti-spasmodic, anthelmintic? I have noted this plant on the authority of Riddell solely. It is closely allied to active medicinal plants. Riddell, Synop. West. Fl.

76 Hieracium Venosum. Hawk-weed. This plant, in conjunction with the other species of the genus, doubtless possesses many valuable properties. They appear to be bitter astringent and narcotic. Lindl. Int. Nat. Syst. 198.

77 Leontodon Taraxacum. Dandelion. Tonic, diuretic, aperient, and deobstruent. Wood and Bache, U. S. Dis. 635.

78 Lactuca elongata. Wild lettuce. Anodyne, and promotes the secretions of the skin and kidneys. Wood and Bache, U. S. Dis. 396. Lindley, Int. Nat. Syst. 198.

79 Arctium lappa. Burdock. Aperient, diaphoretic, sudorific, and alterative. Wood & Bache, U. S. Dis. 107.

80 Vernonia præalta. Iron weed. Said to be a very active purgative. It is prescribed frequently in domestic practice, for the cure of intermittents. Very abundant. Riddell, Synp. West. Fl.

81 Liatris spicata. Ohio devil's bit. Gay feather. Stimulating, carminative, diaphoretic, and diuretic. Wood & Bache, App. 1092. Riddell, Synop. West. Fl.

82 Liatris scariosa. Root tuberous. Dr. Barton remarks, that the tuberous rooted species are all active diuretics. Wood & Bache, Append. 1092.

83 Inula Helenium. Elecampane. Tonic, stomachic, and gently stimulant. Introduced. Wood & Bache, U. S. Dis. 367. Lindley, Int. N. S. 196.

84 Gnaphalium polycephalum. Fragrant life-everlasting. Astringent, pectoral, and corroborant. Wood & Bache, App. 1085. Riddell, Syn. W. Fl.

85 Erigeron Canadense. Canadian flea bane. Tonic, astringent, and diuretic. Wood and Bache, 294.

86 Solidago rigida. Bone's styptic. Stiff solidago. Said to be a good styptic. We have 10 or 15 species of Solidago, among which, some, I have no doubt, will be found to possess medicinal properties. Riddell, Syn. W. F.

87 Eupatorium ageratoides. White snake root. Said to be anti-spasmodic, diuretic, and diaphoretic. This plant has lately created for itself some interest by being suspected of causing the "trembles" in cattle, and "milk-sickness in human subjects; and experiments have been made supposed to be conclusive upon the subject; but there is doubtless some mistake about the matter. The plant grows with us in great abundance, and cattle eat of it freely; but I have never yet heard of a case of "milk sickness" within the borders of our county. Sullivant, Cata. note 11. Riddell, Syn. W. Fl.

88 Eupatorium perfoliatum. Bone set. Thoro' wort. Officinale. Tonic, diaphoretic, expectorant, and in large doses emetic and aperient. Wood and Bache, U. S. Dis. 297. Lindley, Int. Nat. Syst. 196.

89 Eupatorium sessilifolium. Upland bone set. Tonic. Riddell, Sy. W. F.

90 Eupatorium purpureum. Purple thoro' wort. Joe pye. Gravel root. Aromatic, tonic, astringent, and diuretic. W. and B. U S Dis. 299. Rid. Sy.

91 Senecio aureus; Senecio gracilus. Rag-wort. False valerian. Indian name, Nutguaw. Said to be an excellent emmenagogue. Rid. Syn. W. Fl.

92 Helenium autumnale. American sneeze wort. Tonic, bitter, errhine. Wood and Bache, Append. 1087.

93 Echinacea purpurea, Mœnch. Synon. Rudbeckia purpurea, Willd. Purple cone flower. Aromatic, carminative. Ridd., Synop. W. Fl.

94 Bidens frondosa. Spanish needles. Beggar ticks. Riddell, on the authority of hear-say, observes, that the seeds are alterative. Ridd., Synop.

95 Silphium perfoliatum. Cup plant. Indian remedy. Riddell remarks that this and several species of the genus, will probably hereafter be found to possess valuable medicinal properties. Synop. W. Fl.

96 Anthemis Cotula. Wild chamomile. May weed. Dog fennel. Small quantities mild tonic; large doses emetic. Wood and Bache, U. S. Dis. 267. Lindl. Int. Nat. Syst. 196.

97 Achillea millifolium. Yarrow. Milfoil. Mild aromatic tonic and astringent. Wood and Bache, App. 1066.

98 Tanacetum vulgare. Tansey. Aromatic tonic. W. & B. U. S. Dis. 652.

99 Galium aperine. Goose grass. Cleavers. Aperient, diuretic, and antiscorbutic. Wood and Bache, App. 1084.

100 Galium circæzans. Wild liquorice. Diuretic, demulcent, and expectorant. Riddell, Synop. West. Fl.

101 Galium asprellum. Rough bed straw. Diuretic. This, and probably all of this genus, possess diluent and diuretic properties. Eberle, Prac.

102 Cephalanthus occidentalis. Button bush. Tonic, and expectorant. This plant belongs to an order that possesses many valuable and powerful medicines, the principal features of which are powerfully febrifugal and emetic. Ipecacuanha and quinquina belong to them. Lindley, Int. Nat. Syst. 202. Ridd., Synop. Wes. Fl.

103 Mitchella repens. Partridge berry. Creeping evergreen. Said to be expectorant and emmenagogue. Ridd., Synop. Wes. Fl.

104 Triosteum perfoliatum. Horse gentian. Fever root. Cathartic, emetic, and diuretic. Wood & Bache, U. S. Dis. 673. Lindl. Int. N. S. 206.

105 Viburnum prunifolium. Black haw. Tonic and astringent. Riddell.

106 Sambucus Canadensis. Elder. Emetic, cathartic, sudorific, aperient, and alterative. Wood & Bache, U. S. Dis. 578. Lindley Int. Nat. Syst. 205.

107 Asclepias incarnata. Prarie silk weed. Asclepias Syriaca, silk weed, cotton weed. The properties of these plants are doubtless similar, and are said to be anodyne and expectorant. Little however is known about them. Wood & Bache, U. S. Dis. 117.

108 Asclepias tuberosa. Var., Decumbens. Pleurisy root. Butterfly weed. Diaphoretic, expectorant, and mild aperient. It is the opinion of my friend Dr. Boerstler, who has had considerable experience with it, that the medicinal effects attributed to this plant are dependent upon the copious inhibition of warm water. It certainly does not meet the expectations that were at one time entertained in its favor. Wood & Bache U. S. Dis. 118. Lindl. Int. Nat. Syst. 210.

109 Apocynum cannabinum. Indian hemp. Apocynum Androsæmifolium. Dog bane. These plants belong to an order highly active. The Nux vomica, and St. Ignatius' bean belong to it. Emetic, cathartic, diaphorectic and expectorant. Wood & Bache U. S. Dis. 98. Lindl. Nat. Syst. 212.

110 Gentiana crinita. Fringed gentian. Gentiana saponaria. Soap wort. Gentian. Tonic. These plants grow in great abundance on our praries, and doubtless might be substituted for the gentian of the shops. Riddell Synop. West. Fl. Lindley Int. Nat. Syst. 214.

111 Frasera Walteri. American columbo. Tonic. It is said that the recent root is emetic and cathartic. Supposed to be little inferior to the imported Columbo. Lindley Int. Nat. Syst. 214. Wood & Bache U. S. Dis. 318.

112 Sabbatia Angularis. American centaury. Tonic and stomachic. Officinal. This plant grows abundantly with us, and there can be no doubt about its valuable properties, and yet our physicians seem quite indifferent about using it. Wood & Bache U. S. Dis. 565. Lindley Int. Nat. Syst. 214.

113 Convolvulus panduratus. Man of the earth. Carthartic and somewhat diuretic. Wood & Bache U. S. Dis. 259.

114 Convolvulus sepium. Bind-weed. This and the preceding belong to a valuable order; and Dr. Lindley supposes that they will be found to yield resinous extracts equal to the jalap and scammony of the shops. They certainly deserve investigation. Lindley Int. Nat. Syst. 217.

115 Polemonium reptans. Greek valerian. False Jacob's ladder. Sudorific. I have known it used in domestic practice as an expectorant in pectoral complaints. Riddell Synop. West. Fl.

116 Diospyrus Virginiana. Persimmon. Bitter astringent and febrifugal. Wood & Bache U. S. Dis. 285. Lindley Int. Nat. Syst. 219.

117 Fraxinus Acuminata. White ash. Deobstruent. Rid. Sy. West. Fl.

118 Anagalis arvensis. Scarlet pimpernel. Red chick weed. Introduced? Deobstruent, expectorant, &c. It was at one time supposed by the profession, and is still used by empirical practitioners as a specific in hydrophobia. Wood & Bache Append. 1069. Eberle Pract. Med. 2d ed. ij 143.

119 Orobanche Americana. Cancer root. Astringent, and at one time was thought antischevous. Lindl. I. N. S. 226. Wood & Bache App. 1098.

120 Epifugus Americanus. Buck drops. Astringent, same as above. Wood & Bache Append. 1098.

120 2d. Leptandra Virginica. Culvers physic. Cathartic, sudorific, and sometimes emetic. It is said, however, to be uncertain in its action. Wood & Bache U. S. Dis. 688.

121 Antirrhinum linaria. Toadflax. Introduced. Cathartic, diuretic &c. Wood & Bache Append. 1070.

122 Chelone glabra. Snake head. Balmony, used by the Thompsonian empirics as a tonic, &c. Riddell Synop. West. Fl.

123 Solanum Nigrum. Common night shade. Narcotic, cathartic, diuretic, diaphoretic, &c. Wood & Bache U. S. Dis. 288.

124 Solanum dulcamara. Bitter sweet. Introduced. Narcotic, stimulating, alterative, &c. Wood & Bache U. S. Dis. 290. Lindl. Nat. Syst. 230.

125 Datura stramonium. Jamestown weed. Thorn apple. Powerful narcotic. Officinal. Wood & Bache U. S. Dis. 638.

126 Verbascum Thapsus. Mullein. Demulcent and emollient. Wood & Bache U. S. Dis. 687.

127 Verbena hastata. Verbena Urticæfolia. Vervain. Emetic, cathartic, &c. Wood & Bache Append. 1109.

128 Lycopus Virginicus. Bugle weed. Mild narcotic and astringent. Wood & Bache U. S. Dis. 411.

129 Mentha piperita. Pepper mint. Mentha viridis, spearmint. Doubtless introduced. Aromatic stimulant, cordial and tonic. Officinal. Wood & Bache U. S. Dis. 428, 430. Lindl. Int. Nat. Syst. 238.

130 Pycnanthemum Linifolium. Virginian thyme. Fragrant aromatic. The essential oil would perhaps be equal to the oil of Lavender for all practical purposes. Riddell Synop. West. Fl.

131 Collinsonia Canadensis. Horse balm. Rich weed. The root is considered tonic, astringent, and diuretic. I have known the fresh leaves applied externally to inflamed surfaces as a discutient, with good effect. Wood & Bache Append. 1080.

132 Monarda fistulosa. Hollow stemmed horse-mint. Stimulant, stomachic, and deobstruent. Riddell Synop. West. Fl.

133 Blephilia hirsuta, Raf. Syn. Monarda hirsuta, Pursh. Ohio horse mint. Stimulant, carminative, rubefacient. Ridd. Synop. West. Fl.

134 Canilla Mariana? Dittany. Pleasant aromatic diaphoretic. A plant is collected on our hills for domestic purposes, under this common name, but never happening to have an opportunity to examine it in flower, I do not know whether our plant be the Canilla Gabella or the C. Mariana. Lindl. Int. Nat. Syst. 238.

135 Leonurus cardiaca. Mother wort. Said to be emmenagogue. Riddell Synop. West. Fl.

136 Nepeta Cataria. Catnip. Favorite domestic diaphoretic remedy. Nepeta Glechoma, Benth. Synon. Glechoma Hederacea, Linn. Ground Ivy. Tonic, diaphoretic, &c. Wood & Bache Append. 1096. 1085. Lindl. Int. Nat. Syst. 238.

137 Marubium vulgare. Horehound. Tonic, diaphoretic, expectorant &c. Wood & Bache U. S. Dis. 424.

138 Hedeoma Pulegioides. Penny royal. Aromatic, stimulant, emmenagogue. Wood & Bache U. S. Dis. 344. Lindl. Int. Nat. Syst. 238.

139 Prunella vulgaris. Self-heal. Heal all. Astringent. Wood & Bache.

140 Scutellaria galericulata. Scull cap. S. canescens. Hoary scull cap. S. lateriflora. Mad dog. Scull cap. The scull caps are said to be good diaphoretics. The S. lateriflora once so noted for its reputed prophylactic powers in hydrophobia has already descended to the "tomb of the Capulets." Wood & Bache Append. 1104. Riddell Synop. West. Fl.

141 Cynoglossum officinale. Hound's tongue. Demulcent, sedative and expectorant. Wood & Bache Append. 1082.

142 Pulmonaria Virginica. Lungwort. Astringent, demulcent, pectoral? Riddell Synop.

143 Laurus sassafras. Sassafras. Aromatic stimulant, stomachic and diaphoretic. Wood & Bache U. S. Dis. 591.

144 Laurus Benzoin. Spice bush. Stimulant, aromatic. According to Dr. Drake the oil of the seeds is used as a stimulant. Wood & Bache 1091.

145 Aristolochia serpentaria. Virginian snake root. Stimulant, tonic, diaphoretic and diuretic. Officinal. Wood & Bache 607.

146 Asarum Canadense. Wild ginger. Aromatic, Stimulant, tonic and diaphoretic. Wood & Bache U. S. Dis. 116.

147 Dirca palustris. Leather wood. Stimulant, acrid, vesicatory. Similar in its properties to Mezereon, to which it is closely allied. Wood & Bache Append. 1083.

148 Humulus lupulus. Hop. Tonic, narcotic and anodyne. Officinal. Wood & Bache U. S. Dis 354.

149 Ulmus fulva. Slippery elm. Demulcent, mucilaginous and emolient, an excellent medicine and much used. Wood & Bache U. S. Dis. 607.

150 Quercus tinctoria. Quercitron. Black oak.

151 Quercus alba. White oak. The bark of these and several other oaks are valuable astringent, tonic, and antiseptic medicines. Wood & Bache U. S. Dis. 541.

152 Juglans cinerea. White walnut. Butter nut. Mildly cathartic and aperient. Officinal. Wood & Bache 387.

153 Acalypha Virginica. Three-seeded mercury. Expectorant and diuretic. The Euphorbiaceae, to which this plant belongs, possess very active medicinal and poisonous properties. Riddell Synop. West. Flor.

154 Euphorbia hypericifolia. Hypericum leaved Euphorbia. Astringent, alterative, and emmenagogue. Wood and Bache, 300.

155 Euphorbia corollata. Large flowering spurge. Cathartic, emetic, diaphoretic, and expectorant. The recent root is vesicatory. W. & B. 300.

156 Chenopodium ambrosioides. Sweet scented pigweed. Tonic, antispasmodic, anthelmintic. Wood and Bache, 196. Lindl., Int. Nat. Sys. 164.

157 Chenopodium botrys. Jerusalem oak. Tonic, expectorant, anthelmintic. Wood and Bache, U. S. Dis. 196. Lindley, Int. Nat. Syst. 164.

158 Phytolacca decandra. Poke weed. Indian poke. Violently emetic and cathartic, anti-venereal, anti-rheumatic, stimulant, and discutient.—I have seen a late article in Dr. Dunglisson's Journal, by Dr. King, in which it is highly extolled for the radical cure of hæmorrhoids. Lindley, Int. Na. Syst. 165. Wood and Bache, U. S. Dis. 500.

159 Polygonum aviculare. Knot grass. Slightly astringent. Wood & Bache, U. S. Dis. 134.

160 Polygonum punctatum. Smart weed. Biting knot weed. Acrid, diuretic and emmenagogue. Eberle, West. Med. Gaz. 1. Ridd., Synop. Wes. Fl. Wood and Bache, 134.

161 Polygonum Persicaria. Lady's thumb. Vulnerary, and anti-septic. Riddell, Synop. West. Fl. Wood and Bache, 134.

162 Rumex aquaticus; R. crispus; R. obtusifolius; R. Britannicus. Dock. Water dock. Astringent, and mild tonic: Some species are said to be laxative, somewhat resembling the operation of rhubarb. Some, particularly the R. crispus, have been used successfully in cutaneous affections. Wood & Bache, U. S. Dis. 562. Lindley, Int. Nat. Sys. 167.

163 Salix nigra. Black willow. Tonic and febrifugal. W. & B. Dis. 575.

164 Saururus cernuus. Lizzard's tail. Riddell, (Syn. W. F.,) asks the question, Is it medicinal? Lindley (Int. N. S. 170) remarks, that the properties of this order are unknown.

165 Juniperus Sabina, L.; Juniperus Virginiana, L. Savine. Red cedar. Stimulant, emmenagogue, diuretic, and diaphoretic.—What 's in a name!!—Prof. Wood, in remarking upon the properties of J. Virginiana, which he has introduced into his Dispensatory as distinct from J. Sabina, says, "It is, however, *much* less energetic [than the savine,] and though advantage may, as has been asserted, have accrued from its use in amenorrhea, chronic rheumatism, and dropsy, it has not acquired the confidence of the profession generally." With regard to the irritating cerates made from the leaves of the red cedar, he observes:—"But neither of these preparations is as effectual as the analagous preparation of savine."—With regard to the identity of these plants, Prof. Hooker, one of the most eminent botanists of the world, remarks:—"In Eastern America, botanists have enumerated five species of savin-leaved Juniper; J. sabina (which also abounds in Europe and Northern Asia); J. Virginiana, J. Bermudiana, J. Barbadensis, and J. prostrata; but I must confess that among all the specimens I have received from various countries, included between the 53d and 32d degrees of latitude, I can recognize only one species by any botanical characters, and that one differs in no respect from the European J. sabina, to which I unhesitatingly refer it. The leaves certainly differ considerably in different specimens; but not more so than they frequently do, on one and the same individual." Sullivant, Catalogue of plants, note 23, p. 60. Wood & Bache, U. S. D. 391, 566.

166 Pinus Rigida. Pitch pine. Turpentine abounds in this species. Tar is also manufactured from it abundantly. Stimulant, rubefacient, diuretic, anthelmintic, and in large doses cathartic. Tar is frequently used in pectoral complaints. Wood & Bache, U. S. Dis. 507 and 659.

167 Pinus Canadensis. Spruce pine. Hemlock spruce. Stimulant, diuretic and rubefacient, like all Coniferæ. Wood & Bache, U. S. Dis. 507.

168 Iris Versicolor. Blue flag. Emetic, cathartic and diuretic. Wood & Bache, U. S. D. 382. Lindley, Int. Nat. Syst. 259.

169 Sisyrinchium Anceps. Blue-eyed grass. Thomsonians use it under the name of physic grass, as a cathartic. Riddell, Synop. West. Fl.

170 Platanthera Orbiculata, Lindl. Syn. Orchis Orbiculata, Linn. Round leaved orchis. The large soft fleshy leaves are used in dressing blisters; and might be used as a discutient in many other inflammatory affections. Riddell, Synop. W. Fl.

171 Cypripedium Pubescens. Lady's slipper. American valerian. Said to be an excellent tonic and antispasmodic. The roots of all the Cypripediums are used indiscriminately by the Thomsonians. Riddell, Syn. W. F.

172 Helonias Dioica. Blazing star. Tonic and anthelmintic. Lindley, Int. Nat. Syst. 270. Riddell, Synop. West. Fl.

173 Veratrum Augustifolium. Grass-like veratrum. This and the preceding plant belong to a very active and even poisonous order. The active chemical principle, Veratrin, resides in many of these plants, and should this substance retain its reputation in the cure of gout and chronic rheumatism, it would certainly prove an important desideratum to supply ourselves with the principle through means less liable to fluctuation than that of Colchicum, which so often comes to us totally inert. Lindley, Nat. Syst. 276.

174 Allium Canadensis. Meadow garlic. Stimulating, diuretic and expectorant. All the species of this genus possess similar properties. Lindley, Nat. Syst. 272.

175 Aletris Farinosa. Star grass. Colic root. Stomachic, anodyne and tonic. Large doses emetic. Wood & Bache, 60. Lindl. Int. Nat. Syst. 272.

176 Smilax Rotundifolia. S. Quadrangularis. S. Caduca. We have several species of smilax, and among them ought to find something to substitute for the worm-eaten Sarsa of the shops. Riddell, Synop.

177 Smilacina Racemosa, Desf. Syn. Convallaria racemosa, Linn. Solomon's seal. Astringent, corroborant. Riddell, Synop.

178 Polygonatum Multiflorum, Desf. Syn. Convallaria multiflora, Linn. Recommended by Herman as a good remedy in gout and rheumatism. Similar to preceding. Wood & Bache, Append. 1080.

179 Gyromia Virginica. Cucumber root. Indian Cucumber. Diuretic, hydrogogue. Lindl. Int. Nat. Syst. 275. Wood & Bache, Append. 1093.

180 Trillium Grandiflorum. T. Erectum. Wake robin. Birth root. Decandolle and Lindley, two among the most eminent Botanists, consider the roots of these plants as violently emetic: while Dr. Beach, an empirical practitioner of some celebrity, on the other hand regards them as astringent, pectoral, tonic, antiseptic and alterative. Lindley, Int. Nat. Syst. 275. Riddell, Synop. West. Fl.

181 Dioscorea Villosa. Yam root. China root. Emetic, expectorant and diaphoretic. Riddell Synop.

182 Erythronium Americanum. Adder tongue. Dog tooth violet. Emetic. Wood & Bache U. S. Dis. 297.

183 Acorus Calamus. Sweet-flag. Aromatic, stimulant, tonic and stomachic. Wood & Bache U. S. Dis. 138. Lindley Int. Nat. Syst. 285.

184 Arum Triphyllum. Indian turnip. Acrid, stimulant, pectoral. Wood & Bache, U. S. Dis. 114.

185 Symplocarpus fœtidus. Skunk cabbage. Stimulant, narcotic, antispasmodic. Wood and Bache, U. S. Dis. 286. Lindley Int. Nat. Syst. 285.

186 Equisetum. Horse tail. Slightly astringent, diuretic and emmenagogue. Lindley Nat. Syst. 308.

187 Aspidium Acrostichoides. Shield fern. Used by some as a vermifuge. I have felt anxious to find some substitute among our native aspidiums for the old and inert male fern of the shops. Riddell Syn. West. Fl.

188 Pteris Aquilina. Brake. Anthelmintic. Supposed to possess properties similar to male fern. Wood and Bache Append. 1072. Lindl. Nat. Syst. 311.

189 Adiantum pedatum. Maiden hair. Pectoral, lenitive. Lindley Nat. Syst. 311. Wood and Bache Append. 1067.

190 Osmunda Spectabilis. Showy Osmunda. Used in 3 drachm doses successfully in rickets, according to Dr. Lindley. Int. Nat. Syst. 311.

[No. 5.]

DR. DAWSON'S ADDRESS.

Mr. President: The object of this paper is to lay before you a few remarks on one of the diseases which prevailed in the eastern part of Green county, where I reside. Precluded by the circumstances surrounding us, from successfully cultivating pathological anatomy, perhaps the most interesting branch of our profession, we are compelled to give a different direction to our observations, or else remain idle.

The season of 1838, to go so far back, was characterized with considerable drought. The months of March, April and May of that year, brought with them the usual quantity of rain. The drought commenced in June, and to speak in general terms, continued up till the fall and winter of '39 and '40. Since that time we have had an unusual quantity of rain. Here, then, were the two extremes, humidity and drought; and that they have exerted some agency in modifying or increasing the disorders of the country, seems to be the most reasonable conclusion.

In our section of the country, the *general* health underwent no material change. About the usual amount of sickness made its appearance. But it was obvious to all that the character of the diseases differed widely from former years. Remittent and intermittent fever prevailed more than formerly, and the latter visited sections of the country hitherto exempted from its influence.

The most important disease that occurred among us, was a fever in the form of an epidemic. Various names were appropriated to it. Some called it "winter fever," because it prevailed as well in the winter as in the summer; others, typhus, because it was supposed to resemble typhus more than any other form of fever.

Much evidence might be cited to prove that it was contagious, as much so as scarlatina, and generated and propagated in a similar manner.

Symptoms.—The onset of the disease was manifested by pain in the head, sometimes confined to a circumscribed spot; severe cases did occur, however, in which the cerebral distress was so inconsiderable as to be unnoticed. Some complained of chills in the commencement, though it was by no means a pathognomonic of the disease.

The tongue was generally covered with a *thin white* fur, through which the papilla protruded, the sides and apex being red, and the shape not much changed from the normal. There was no appreciable abdominal tenderness in the commencement, but it generally supervened after a few days had elapsed, and with it protracted discharges from the bowels. The sanguiferous system was but little disturbed—the pulse *small* and *soft*, and seldom exceeded 80 beats to the minute. Skin *soft* and *natural*, except a slight elevation of temperature. Rose colored spots *occasionally* made their appearance over the whole surface, but always on the cheeks. They would make their appearance and recede again several times in the course of twenty-four hours. A dry cough attended most cases. This, by its irritating effects, frequently gave rise to pains in the chest, which induced some practitioners to believe that the disease had some connection with pneumonia typhoides, or "winter fever," as our provincial nomenclature has it.

This description seems to present no formidable array of symptoms; yet it is a fact, that the disease under the best directed efforts of the physician, did sometimes last fifty days. Few cases recovered under twenty days, and it was not uncommon to see convalescence protracted to four or five weeks.

Diagnosis.—The only disease with which this might have been confounded, was typhus fever. As a general remark, however, the invasion and progress of typhus fever presents a formidable array of symptoms; in this the symptoms were very mild, and continued so for many days—the patient sometimes complaining of nothing but weariness. In typhus, the skin is dry, hot and husky; in this the skin seemed to preserve the integrity of its functions. In genuine cases of typhus, a miliary exanthema makes its appearance on the skin; in this we had the rose colored spots. In typhus, the sanguiferous system is predominantly affected, manifesting itself with a *quick*, *small*, *hard* pulse, with occasional irregularity; in this the action of the heart and arteries underwent but little tangible derangement. In typhus, the tongue is dry and parched; in this the tongue had rather the flabby, moist appearance of the dyspeptic. In typhus, respiration is laborious, the breath hot and offensive; in this the derangement was a troublesome cough. In typhus, the bowels are generally costive in the commencement; in this the opposite condition obtained. In typhus, there is a disposition to run its course and terminate in a crisis; in this no such law can be recognized—the patient's illness would sometimes last six or seven weeks.

Cause.—Of the predisposing or exciting cause, nothing was certainly known, though it seems reasonable that the extremes of wet and drought have exercised an agency favorable to its developement and prevalence. Whatever the cause may have been, its powers and activity suffered no impairment from temperature, for the disease prevailed summer and winter.

The *pathology* of this fever was a fruitful theme of speculation, inasmuch as no opportunities were offered to make *post mortum* examinations.

That inequilibrium of excitement constituted one of the governing elements of the disease, is evident from the fact that inflammation of various organs supervened in protracted cases. In one case that fell under my observation, the patient labored under the symptoms I have described, and the fever seemed purely idiopathic for four weeks, when suddenly inflammation of the bowels was developed. When this gave way, hepatites set in. This continued for four or five days, and seemed to be yielding to the proper remedies, when a metastases to the right leg took place, and relieved the hepatic distress entirely. A disordered condition of the mucous membrane of the bowels seemed to me to constitute no inconsiderable share of the pathology of this fever. Whether the lesion consisted in inflammation of the proper tissue of the membrane itself, or of the villi, or of the follicles, known as the glands of Peyer, of course with our opportunities, we were unable to determine. Disorder of the glands of Peyer, seems to have constituted the pathology of that fever which Dr. Gerhard investigated in the Blackley hospital of Philadelphia, and denominated *typhoid fever*.

In his article on "the state of the alimentary canal in fever," Andral pays quite a compliment to the labors of Broussais on this subject, and agrees with him that we should seek for the cause of fever in a morbid alteration of some part of the body; and that the treatment should be directed against the local affection, and not against the fever, which is a mere effect. While, however, agreeing with Broussais, that fevers of every kind may be attributed